

RELEVÉ DE : DEBITS MOYENNES MENSUELLES ET ANNUELS (M**3/S)

STATION : QUED ZA TAOURIRT (18026KM2)

CODE : 3

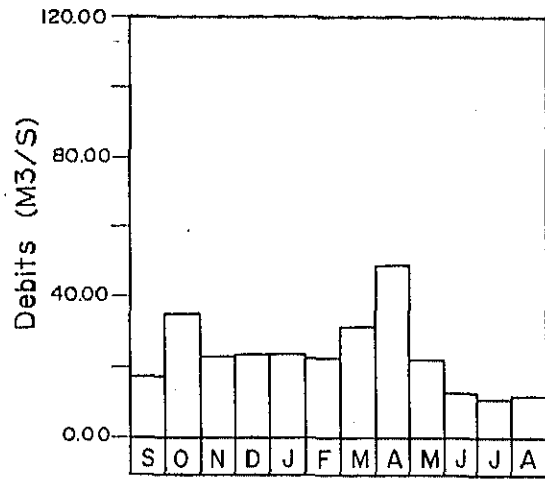
LATITUDE : 732.000

LONGITUDE : 425.000

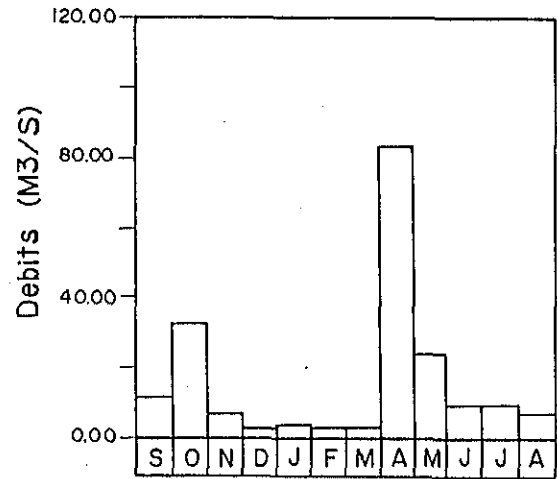
ALTITUDE : 365.0

MOIS ANNEE	SEPT	OCTO	NOVE	DECE	JANV	FEVR	MARS	AVLIL	MAI	JUIN	JUIL	AOUT	ANNUELS
1957-1958	**	**	**	**	**	**	**	3.160	**	**	**	**	**
1958-1959	**	**	**	**	**	**	**	1.170	1.570	1.290	1.570	2.790	**
1959-1960	5.800	1.780	2.300	7.070	6.400	3.510	2.640	3.670	2.580	16.900	3.920	3.240	4.968
1960-1961	3.170	3.410	3.540	4.030	4.240	3.570	6.390	2.290	1.610	1.740	1.600	1.300	3.074
1961-1962	2.760	2.520	5.310	2.190	1.890	3.400	2.540	3.300	2.160	8.430	1.140	1.150	3.042
1962-1963	5.100	7.260	3.180	1.750	1.670	1.600	1.440	1.260	27.000	1.650	1.210	**	**
1963-1964	5.830	0.890	0.838	1.340	1.470	1.370	1.290	1.280	1.050	1.270	1.490	1.510	1.630
1964-1965	1.520	1.730	2.190	2.530	5.580	4.470	4.300	8.280	1.130	0.884	0.648	0.948	2.833
1965-1966	0.949	1.090	1.040	1.020	0.955	0.444	0.401	0.377	6.010	6.260	5.170	5.210	2.429
1966-1967	8.480	17.500	5.200	2.600	2.360	2.250	2.010	3.340	4.180	5.850	2.310	2.270	4.875
1967-1968	4.560	6.520	10.600	0.106	0.092	0.024	0.184	0.116	2.040	0.685	0.508	0.505	2.154
1968-1969	0.508	0.566	0.757	0.913	0.945	0.858	0.872	0.910	0.979	3.030	1.780	2.580	1.227
1969-1970	2.160	4.090	2.080	2.000	2.160	1.720	1.710	1.470	1.380	1.340	1.150	1.190	1.873
1970-1971	4.260	2.110	1.900	2.150	2.930	2.130	1.880	16.900	3.170	1.270	2.290	1.690	3.541
1971-1972	3.230	1.070	3.800	2.580	2.380	2.040	2.320	1.790	2.270	2.370	1.290	1.330	2.200
1972-1973	4.940	3.510	2.080	2.100	2.180	2.580	3.810	9.690	1.700	1.790	1.420	1.400	3.088
1973-1974	1.490	1.690	3.950	4.140	2.820	2.760	3.460	3.730	1.860	1.710	1.700	1.360	2.552
1974-1975	2.590	2.090	2.010	2.320	2.270	3.030	2.430	82.400	10.200	5.160	1.950	3.080	9.874
1975-1976	2.530	2.480	2.870	2.410	2.270	2.270	3.390	4.280	16.300	2.870	5.480	6.130	4.466
1976-1977	13.200	2.680	2.420	2.850	5.050	3.310	1.970	1.790	3.220	1.440	1.290	1.310	3.363
1977-1978	4.570	18.800	7.000	2.200	3.090	2.420	2.000	2.330	1.420	1.350	1.030	1.250	3.969
1978-1979	1.360	1.870	1.830	2.570	2.930	3.010	1.950	1.850	1.710	1.580	1.180	6.560	2.369
1979-1980	18.400	**	0.519	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.030	**
1980-1981	3.970	0.0	0.069	6.560	7.720	6.460	5.770	5.450	4.850	5.050	7.940	6.690	5.048
1981-1982	8.520	7.170	5.520	16.300	16.700	10.900	10.000	**	**	**	**	**	**
TOTAL	109.897	90.826	71.003	71.729	78.102	64.128	62.757	160.833	98.389	73.919	48.066	53.523	68.577
HOMBRE	23	22	23	23	23	23	23	24	23	23	23	22	20
MOYENNES	4.778	4.128	3.087	3.119	3.396	2.788	2.729	6.701	4.278	3.214	2.090	2.433	3.429
MAXIMAM	18.400	18.800	10.600	16.300	16.700	10.900	10.000	82.400	27.000	16.900	7.940	6.690	9.874
MINIMAM	0.508	0.0	0.069	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.030	1.227

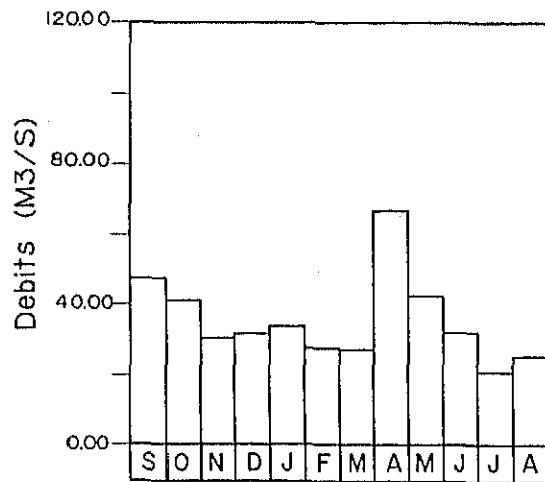
** --- NON-MATERIAUX



1. GUENFOUDA
(1966~1985)



2. AIN BENI MATHAR
(1969~1985)



3. TAOURIRT
(1965~1983)

(1) CARTE DE DEBITS MOYENS MENSUELS

● Soil Classification System of the Pedology Section, ORSTOM, France—1964

Class I.	Little weathered, skeletal soils 1.1 Due to climate: Groups—cold regions, deserts 1.2 Nonclimatic: Groups—eroded or skeletal recently deposited
Class II.	Poorly and minimally developed soils 2.1 Due to climate: Groups—Tundra, Rankers, Subdesert 2.2 Nonclimatic: Groups—Regosolic, Andosols, recent materials
Class III.	Calcomagnesimorphic soils 3.1 Rendzina: Groups—thin rendzina, rendzina with horizons, calcimorphic alluvial
Class IV.	Vertisols and Paravertisols 4.1 Topomorphis (depressional): Groups—Vertisols and Paravertisols 4.2 Lithomorphis: Groups—Vertisols and Paravertisols
Class V.	Isohumic soils 5.1 Isohumic soils with partially saturated complex: Groups—Bimodal: Brunizems, Brunizem w/textural B1, Pseudogley; Brunizem, Vertic Brunizem, Alkalic Brunizem 5.2 Isohumic soils with saturated complex: Groups—Chernozem, Chestnut, Brown soils
Class VI.	Mull soils 6.1 Mull soils of temperate regions: Groups—Lessive, Brown soils 6.2 Mull soils of tropics
Class VII.	Podzols and Podzolic soils 7.1 Soils with mor and R_1O_3 -enriched horizon 7.2 Soils with mor, R_1O_3 -enriched horizon and gleyed
Class VIII.	Sesquioxide soils with rapidly mineralized organic matter 8.1 Red and Brown Mediterranean soils 8.2 Ferruginous Tropical soils 8.3 Ferrallitic soils
Class IX.	Halimorphic soils 9.1 Halomorphis without degraded structure 9.2 Halomorphis with degraded structure
Class X.	Hydromorphic soils 10.1 Organic hydromorphis 10.2 Medium organic matter hydromorphis 10.3 Low organic matter hydromorphis

SOURCE: Aubert 1968

TABLEAU DES POINTS D'EAU: CERCLE de Ouïda

Communes Rurales	Désignation	N d'ordre	Nature	Coordonnées		Caractéristiques				Moteur			Observations		
				X	Y	Débit (/s)	Profond totale (m)	Forage Crépine (m)	Diamètre (ø)	Marque	Type	Puissance		Type de la pompe	
C.R SIDI YAHYA	F. KB route Affir	5	Puits	816.860	447.060	5	65	64,60	1,60	PETTER	PH 2	12,5	ROVATI	Bon état	
	Hassi Houwara	6	Puits	819.920	471.050	2	32	31,60	1,60	PETTER	PH 2	12,5	GRAND FOS	Bon état	
	Zoudj Béghal	7	Puits	828.430	470.510	6	20,10	19,50	2	LEROYSONER	112M/2	7,5	ROVATI	Bon état	
	Hassi Nekki	8	Puits	830.150	462.480	4	27	26,40	1,20	SAME	1052	25	ROVATI	Bon état	
	Hassi Snalna	9	Puits	815.200	461.600	3	17	16,40	1,60	PETTER	PH 2	12,5	ROVATI	Bon état	
	Hammel	12	Forage	812.500	464.550	1	125	115	8"	STTER	-	13	GRAND FOS	En panne	
	C.R Naïma	Hassi sanla	11	Puits	807.910	455.800	3	26	25,40	1,60x4	SAME	1052	22	ROVATI	Bon état
		Haassi Raken	10	Puits	809.300	457.350	6	23	22,40	1,60	SAME	1052	27,50	GRAND FOS	Bon état
		Béni Oukil	19	Forage	806.800	452.950	4	300	66	7"	SAME	1054	50	GRAND FOS	Bon état
	Mestferki	Hassi Rosfa	20	Puits	785.000	440.500	7	57	56,60	1,60	PETTER	PJ 3	25	AHDI	Bon état
	Ain Sfa	Hassi Boussir	13	Forage	802.000	467.000	2,15	113	90	9"	PETTER	1053	36	GRAND FOS	Bon état
		Nouveaux puits Centre Ain Sfa. Encien puits A. Sfa	15	Puits	798.000	467.000	5	14,70	14	1,60	LEROYSONER	-	7,5	ROVATI	Bon état
Béni Drar	A. Sfa	14	Puits	789.000	467.500	2	32	31,40	1,60	PETTER	PH 2	12,5	AHDI	Bon état	
	Tafaghdant	16	Forage	794.800	460.200	3	150	40	9"	SAME	1052	25	ROVATI	Bon état	
	Béni Mâmoun	17	Forage	800.000	459.000	2	180	132	7"	SAME	1052	27,5	ATURIA	Bon état	
	Hassi Bessara	18	Puits	791.900	459.000	3	34	33,40	1,60	SAME	1053	36	ROVATI	Bon état	
	Eassi Guerbouz	1	Puits	808.250	483.700	2	32	31,60	1,80	LISTER	SR 2	13	J DEAL	En panne	
	Hassi Azizaïne	2	Puits	810.100	477.100	3	36	35,40	1,20	LISTER	HR 3	27	ALTA	Ben état	
C.R Tiouli	Béni Drar Centre	3	Puits	811.250	478.100	20	43	42,60	1,80	LEROYSONER	-	30	GRAND FOS	Bon état	
	Hassi Jdaïni	4	Puits	813.000	480.000	3	26	25,40	1,60	SAME	1053	27	ROVATI	Bon état	
	Oued El Hamer	21	Puits	823.000	435.000	1	24	23,60	1,60		ELOLIENNE			En panne	
	Chrayaâ	22	Puits	827.250	425.955	3	4	3,60	1,60	PETTER	PJ 3	25	ROVATI	Bon état	
Tiouli centre	23	Puits	827.400	429.400	3	500	1,72	9"	BERLIET		80	ATURIA	Bon état		

TABLEAU DES POINTS D'EAU: Cercle de Taoumint

Communes Rurales	Désignation	N d'ordre	Mature	Coordonnées			Caractéristiques				Moteur			Type de la pompe	Observations
				X	Y		Débit (/s)	Profond totale (m)	Forage Crépine (m)	Diamètre (ø)	Marque	Type	Puissance		
EL AÏOUN	Botmat Jamaâ	1 b	Forage	779.000	447.000	3	150	-	7"	-	-	-	-	-	Non équipé
	"	2 b	Puits	779.600	446.400	3	32	31,60	1,60	LISTER	SR 2	13	13	13	Bon état
	"	3 b	Puits	778.300	446.000	2	55	55	1,60		EOLIEENNE	"			En panne
	Hassi Kadda	4 b	Puits	774.000	448.000	1	27	26,40	1,40		"				En panne
	Oulad Brazz	5 b	Puits	777.000	445.800	1	33	36,60	1,00	PETER	PH 2	12,50	GROUND FOS		Bon état
	Bouâmama	6 b	Puits	775.000	449.000	2	23	23	1,40		"				En panne
	Ras Bourdime	7 b	Puits	778.300	452.000	2	32	31,50	1,60		"				En panne
	Hasi Bachir	8 b	Puits	771.000	449.000	2	12	11,40	1,40		"				En panne
	Tabouaabane	9 b	Forage	776.000	448.000	12	150	26	9"	LISTER	SR 3	36	IDEAL		En panne
MESTIGHEUR	Hassi Sidi Okba	10 b	Puits	794.000	450.500	2	16	15,60	1,20						En panne
	Hassi Kchachta	13 b	Puits	743.000	427.500	2	43	42,50	1,20	PETER	PH 2	12,50	GRAND FOS		Ben état
MECHRAA HAMMADI	Dar Caïd Amr	11 b	Puits	749.00	452.000	2	32	31,50	1,20						Bon état
	Hassi Sekkouma	12 b	Puite	755.000	430.000	1	41	40,60	1,40	PETER	PH 2	12,5	ROVATI		Bon état
TENCHERFI	Souk Khemis	14 b	Puits	751.000	423.000	3	13,50	13,00	1,40	LISTER	SR 2	24	AHDI		Bon état
	Oued Tlegh	16 b	Puits	706.000	413.000	1	32	31,40	1,20	LISTER	SR 2	13	ALTA		Bon état
GOUTTIR	Hassi Gouttitir	15 b	Puits	714.000	420.500	3	13,50	13	1,40	PETER	PJ 1	8,5	ROVATI		Bon état
	Hassi Turch	17 b	Puits	716.000	405.000	3	13	12,60	1,20		EOLIEENNE				Non état
	Oglat Naâja	18 b	Porage	709.000	402.000	5	42	19,50	9"	SAME	1053	36	ATURIA		Bon état
	Hassi Chouali	19 b	Puits	727.000	397.000	1	55	54,60	1,40	LISTER	HR 2	24	GRAND FOS		Ben état
DEBDOU	Hassi Tafrata	20 b	Puits	702.500	379.000	1	30	-	1,40	-	-	-	-	-	Non équipé
	Hassi Aluane	21 b	Puits	707.800	378.000	1	14	-	1,20	-	-	-	-	-	Non équipé

TABLEAUX DES POINTS D'EAU: Cercle de Jerada

Communes Rurales	Désignation	N d'ordre	Nature	Coordonnées			Caractéristiques				Moteur			Type de la pompe	Observations
				X	Y	Z	Débit (/s)	Profond totale (m)	Forage Crépine (m)	Diamètre (ø)	Marque	Type	Puissance		
AOUMINET	Moul Zebbouja	1 a	Puits	812.380	440.855	1	28	27,60	1,20	Lister	SR 1	6,5	ALTA	En panne	
	Hassi Boussaïd	2 a	Puits	808.800	438.400	2	12	11,80	1,60	EOLIENNE				Bon état	
	Lamasâda	3 a	Puits	812.980	436.740	4	13	12	1,20	Petter	PJ 2	17	AND I	Bon état	
	Fadane Labid	4 a	Puits	814.000	439.000	1	13	12,60	1,20	EOLIENNE				En panne	
	Guenfouda	5 a	Puits	807.770	436.975	2	6	5,80	1,20	Petter	PH 1	6,5	ROVATI	Bon état	
	Hassi Hajja	6 a	Puits	806.000	403.000	2	14	-	1,40	-	-	-	-	Non équipé	
	Hassi Allouada	7 a	Puits	815.000	431.000	0,5	33	-	1,40	-	-	-	-	Non équipé	
MERIJA	Forage Aouinet	31 a	Forage	792.500	430	10	130	67	14"	Deutz	-	46	PIEUGER	Bon état	
	Rkiz	10 a	Forage	790.800	389.400	3	220	148	6"	SAME	1053	36	GRAND FOS SP16/20	Bon état	
	Khaoune Si M'Hamed	11 a	Forage	790.145	382.900	3	400	126	5"	SAME	1053	36	GRAND FOS SP16/20	Bon état	
Béni Nathar	Rebt El Fouganî	12 a	Forage	788.200	372.600	2	100	90	6"	EOLIENNE				En panne	
	Tiskenit	13 a	Forage	784.200	366.300	3	692	180	7"	SAME	1055	75	GRAND FOS SP16/24	Bon état	
	Khouna Sassi	14 a	Forage	794.090	357.290	5	367	160	7"	SAME	1054	52	GRAND FOS SP16/24	Bon état	
	Dayat Oulad Sidi Ali	15 a	Forage	779.930	355.760	3	388	168	6"	SAME	1053	36	GRAND FOS SP16/24	Bon état	
	Merija Centre	16 a	Puits	779.900	384.000	4	4,60	4	2	LISTER	SR 2	13	FORGET	Bon état	
	MSSIDIRA	17 a	Puits	766.580	384.000	1	35	34,60	1,60	PETER	PJ 1	6,6	ROVATI	Bon état	
	Hassiane Diab	18 a	Puits	757.000	375.400	1	-	4	1,50	-	-	-	-	Non équipé	
	Forage C.T	9 a	Forage	804.500	402.600	100	80	-	9"	-	-	-	-	Non équipé	
Guefrait	Rabt Tahtani	19 a	Forage	799.350	386.250	4	118	94	7"	LISTER	SR 1	6,5	I DEAL	En panne	
	Hkhila	20 a	Forage	814.000	370.000	9	91	46	9"	DORMAN	DT 4	80	GRAND FOS	En panne	
	Guelb Acud	21 a	Forage	818.400	380.000	2	115	48	9"	EOLIENNE				En panne	
	Hassi Laabid	30 a	Puits	813.500	400.500	2	31	30,60	1,60	PHTER	PJ 1	8,5	ALTA9 90	Bon état	
	Souk Guefrait	8 a	Puits	780.000	410.000	3	14,50	14	1,60	PETER	PH 1	6,5	ROVATI	Bon état	
	Hassi Siblia	22 a	Puits	836.000	385.000	2	3	32,60	1,60	EOLIENNE				En panne	
	Doughmania	23 a	Puits	838.100	381.690	1	55	54,50	2,00	PETER	PH 1	6,5	ROVATI	Bon état	
	Sehb Sedra	24 a	Forage	841.200	372.500	4	380	182	7"	SAME	1054	50	ATURIA AB14B20	Bon état	
	Oglat Habboure	25 a	Puits	839.300	363.000	1	25	24	1,60	EOLIENNE				En panne	
	Jhan Mekhtour	26 a	Forage	831.200	357.300	4"	295	160	7"	LISTER	HR 4	43	GRAND FOS	Bon état	
led Sidi Abdelhakem	Dhar Gead	27 a	Forage	821.500	351.700	1,5	110	70	7"	LISTER	SR 2	10	PLEUGER	Bon état	
	Ouzienne	29 a	Puits	807.650	400.000	2	23	-	1,40	-	-	-	-	Non équipé	
	Cued Louglat	29 a	Puits	831.000	398.600	1	55	54,60	1,60	Peter	Ph 1	8,5	GRAND FOS BP105	Bon état	

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau Niveau de plézométrique (m)		Débit (l/s)	Coordonnées (km)	
						X	Y
2363					74		
2431					30		
2364					51		
2430					20		
2390					66		
2432	632	204	571.00	-61	97	818.500	452.155
1126	609.90	44.11	569.58	-40.32	80	821.660	455.500
1127					47		
1255					28		
2311					62		
1253	597.80	34.54	575.16	-22.64	25	816.945	455.280
143	596.04	57.00	564.39	-31.65	20	819.873	456.027
2923	585	85	570.80	-14.20	100	824.000	457.170
9	679.50	34	647.50	-2.00	2.5	780.745	441.350
4	678	37	648.00	-7.00	23	780.000	440.885
231					15		
850					16		
624					1		
6	679.50	40	669.50	-10.00	17	780.570	440.890
1292					14		
1325	629.23	46.3	590.28	-38.95	15	791.100	456.950
1274	612.72	40.12	573.77	-38.95	2	799.704	465.102
2888	597	141	536.25	-60.75	9	787.560	461.230
268	622.40	26	592.53	-29.87	18	825.020	466.250
1931	612	25.20	592.23	-19.77	16	788.550	460.600
1865	614	33.30	192.70	-21.30	33	788.390	460.600
257	611	30	591.00	-20.00	22	788.580	460.000
1878	606.34	33	586.34	-20.00	2	787.565	461.530
307	626	38.21	588.02	-37.98	2		
1213		32			5	816.700	467.950
1872	480.18	65	538.34	-11.60	3	815.200	461.600
1871	549.94	26.31	429.81	-20.05		811.250	478.100
616	449.86	21.74	429.81	-20.05		814.700	478.500
1220	437.81	11.43	428.27	-6.15		817.250	477.550
1218	434.42	7.22					

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau de plézométrique (m)		Débit (l/s)	Coordonnées (km)	
			Niveau de	Niveau		X	Y
1219	443.90	20.62	429.90	-14.00		815.450	475.600
1222	469.97	27.68				811.950	473.400
1214	458.24	23.91				814.950	471.650
1217	442.58	18.96	428.98	-13.60		817.600	473.550
1875	446.67	38.47	425.82	-20.85		820.000	472.550
1215	458.06	39.50	429.26	-28.80		819.800	471.100
1211	456.13	36.40				823.050	471.150
1210	455.66	21.60				825.000	470.350
790	467.23	35.77	433.58	-33.65		822.540	169.920
1873	461.26	33.15	441.008	-20.18		826.600	469.450
1874	461.32	30.64	433.17	-28.15		822.350	469.250
1216	481.97	49.90	435.15	-46.82		820.800	467.550
1209	477.04	14.03	466.09	-10.05		824.100	467.100
1207	478.25	36.20	450.00	-28.25		830.370	467.100
1206	493.23	41.52				828.720	465.500
1202	527.80	15.18	514.65	-13.15		831.225	463.620
903	518.34	18.53	500.54	-17.80		826.320	463.570
1205	515.74	17.27	503.14	-12.60		825.360	462.900
1208	509.17	19.43	495.55	-13.62		822.500	464.110
1201	531.93	33.20				827.920	461.700
2952						822.500	467.100
1204	527.02	18.39	518.51	-8.51		822.450	461.000
1212	532.40	16.25	522.60	-9.80		820.900	461.100
810	519.92	28.47	492.22	-27.70		818.390	464.420
1858	615.04	33.38	528.14	-32.90		794.250	461.950
1885	625.83	47.00				781.850	458.550
1203	557.26	22.81				821.470	458.820
1200	576.53	44.05				824.300	458.700
2901	609.00	103.00				825.700	457.450
2902	565.00	55.00				826.930	458.750
2926	585.00	23.97	570.64	-14.36		824.000	457.170
1224	473.62	350.55	396.52	-77.10		808.000	477.500
151	615.08	52.03	570.54	-44.54		820.370	455.384
1250	569.21	431.00				802.100	469.850
2898	615.00	102.00				824.700	455.600

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau pléziométrique (m)		Débit (l/s)	Coordonnées (km)	
			Niveau de	Niveau		X	Y
2899	620.00	66.42	575.93	-44.07		825.150	454.650
2900	610.06	97.00				826.750	455.100
2933	650.00	132.00	578.18	-71.82		824.050	454.000
2948	685.00	157.00	573.18	-111.82		822.600	452.100
276	621.80	587.30	-34.50			783.680	459.530
2362	593.49	90.51	573.59	-19.90		817.500	455.000
2934	630.00	134.02				818.500	454.400
1148	602.10	128.60				217.800	454.400
1199	640.79	125.90	581.81	-58.98		814.420	454.720
337	632.04	42				782.070	460.390
266	624.90	45.55	581.60	-43.30		785.565	461.550
1100	611.63	35.35	581.33	-30.30		785.980	458.000
1724	625.66	38	587.66	-38.00		782.900	460.000
367	630.50	45.25				788.630	462.540
2871	620.00	82.22	566.26	-53.74		826.300	456.000
1125	608.78	95.15	568.78	-40.00	80	824.000	457.170
2425		300			6	806.800	452.155
2938	439	34	427.00	-12.00	35	817.550	473.600
2939	439	34	426.10	12.90	25	817.650	473.000
2941	445	32	429.60	-15.46	20	817.900	472.050
2942	450	41	429.94	-20.06	25	817.900	471.250
2404	665	454	576.00	-89.00	30	791.500	449.600
2924	710	255	595.00	-115.00	7	777.150	464.150
2925	650	150	588.00	-62.00	2	799.250	458.500
1225	499.27	275.45	460.52	-38.76		809.500	470.100
215	616					781.300	457.500
193	609.70					786.750	455.500
419	610					787.500	458.700
192	608					792.960	460.700
305	618	36.23	587.66	-31.16		782.400	456.020
1261	636.57	47.73				791.700	461.520
336	636.57	47.73				781.600	461.390
421	609.05	29.40				788.980	459.050
254	618.30	34				788.860	461.060
705	630	290	495.00	-135	4	772.850	457.000

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau Niveau de plézométrique (m)	Débit (l/s)	Coordonnées X	Coordonnées Y (km)
191						
215	612.30	23.30			790.755	460.735
243	611.97	27.79			790.240	460.450
245	623.30	46.20	-41.95		789.670	461.800
270	637.38	29.50			784.460	461.980
326	630.15	36.96			783.215	461.000
338	637.26	54.82	-50.20		781.080	460.430
1221	486.21	40.05			810.800	470.500
1199						
1248						
1286	611.30	33.20	-30.62		786.350	457.700
1289	619.22	36.55	-33.85		785.160	460.360
1298						
1798	607.10	30.82	-27.40		790.850	458.900
1876	609.86	46.58	-26.60		791.600	460.200
1877	608.00	30.00	-21.45		790.270	459.100
1879	605.80	30.00	-20.30		788.550	457.500
1880	619.27	32.00	-26.90		787.000	460.800
1881	610.73	32.00			787.150	458.880
1882	612.68	34.50	-28.55		785.400	459.150
1883	628.88	60.50	-40.02		786.150	461.900
1884	618.82	34.00	-29.97		783.680	458.000
1223	458.51	38.00			810.550	477.400
253	615.35	33.58	-29.63		789.010	460.855
1267	608.50	27	-16.60			
1268	610	24	-18.19			
310		32.30	-24.24			
1363		24	-15.13			
1361	617.36	16.40	-11.64			
312		20.90	-15.17			
321		28.75	-27.52			
247		27.50	-19.68			
1110		24.50	-20.13			
1114		30	-22.83			

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau Niveau de plézométrique (m)	Débit (l/s)	Coordonnées (km) X Y
318	616.20	28.10	600.00		
1312		28	-16.20		
260		18	-17.65		
1115	610	21.45	-13.81		
1276		27	-13.96		
308	630.80	44.7	-19.07		
1288		25	-26.35		
274		31	-15.92		
1080	617	27.50	-25.39		
249		34.50	-17.24		
434	630.80	45	-21.85		
335		49.20	-30.65		
269		38.40	-34.50		
1294		37	-29.47		
732	765	0	-21.51		
733	780	2.48	0		
734		0	777.67		
735	765	4.35	-2.33		
736	760	3.60	0		
737	780	4.74	-3.25		
739	780	4.00	-3.50		
740	820	10.38	-4.50		
741	780	12.58	-3.17		
742	790	7.98	-10.16		
743	770	12.50	-12.55		
745	740	4.82	-7.87		
748	730	19.42	-12.35		
749	750	19.85	-4.77		
750	750	19.68	-10.22		
751		8.20	-19.51		
752		8.27	-18.85		
812		0	-7.90		
713		26.52	-7.97		
814		21.20	0		
815		18.08	-26.42		
			-20.12		
			-18.06		

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau de plézométrique (m)	Débit (l/s)	Coordonnées X	Coordonnées Y (km)
818		0	0			
822		15.10	-12.98			
2669		2.75	-1.43			
828		6.47	-6.37			
830		31.30	-30.45			
2687		4.14	-4.04			
2689		36.90	-34.90			
2693	715	27.07	-26.96			
2699	742	29.36	-28.99			
2704	770	0	0			
2711	800		-8.40			
2716	780	19.85	-18.83			
2718		8.87	-26.16			
2854	670	41.00	-40.15			
1797	617	39.90	-34.90			
1837	623	38.00	-32.60			
2327	638	47.77	-46.01			
2422	735	14.20	-13.89			
802	745	16.20	-15.90			
2636	730	29.94	-27.32			
803	718	23.19	-22.87			
804	722	19.75	-19.15			
2639	695	25.23	-24.75			
805	694	23.38	-23.00			
806	692	23.20	-13.10			
807	694	21.92	-21.66			
2643	698	34.80	-34.50			
2644		0	0			
809	790	15.15	-15.03			
2721	830	9.15	-7.50			
811		0	0			
2730		0	0			
2739	830	8.14	-7.84			
2741	760	20.80	-19.35			
2743	755	13.61	-12.10			

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau Niveau de pléziométrique (m)		Débit (l/s)	Coordonnées (km)	
						X	Y
2748	740	6.63	735.27	-4.73			
2759	639	51.04	599.48	-49.52			
2762	642.5	63.85	579.30	-63.20			
2774		34.40		-31.18			
2775		30.72		-30.40			
744	742	7.90	734.85	-7.15			
2791	623	37.50	586.27	-36.73			
2800	611.25	36.95	586.90	-24.35			
2823	715	20.80	695.50	-19.50			
2706		0		0			
2841	624	33.94	592.20	-31.80			
2850	740	0		0			
2852	670	23.50	646.79	-23.21			
2853	615	27.70	587.62	-27.38			
25	708	5.80	706.40	-1.60			
38		33.80		-33.12			
755		33.04		-32.55			
757		18.05		-17.88			
249		37.53		-32.55			
258		28.88		-22.86			
2722	833	10.35	823	-10.00			
426		6.90		-6.50			
432	623	49.17	590.67	-32.33			
628	710	14.03	697.38	-12.62			
629	738	21.79	717.40	-20.60			
630	730	26.03	705.17	-24.83			
632	697	26.55	670.64	-26.36			
635	800	0		0			
636	860	0		0			
637	870	0		0			
638	930	0		0			
639	770	16.58	753.67	-16.33			
640	845	3.80	842.30	-2.70			
641	850	0		0			
642	940	0		0			

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau de Niveau de pléziométrique (m)	Débit (l/s)	Coordonnées (km) X Y
643	835	0	0		
645	850	0	0		
647	830	0	0		
648	850	4.05	-3.65		
649	805	0	0		
651	770	2.85	-2.83		
654	910	0	0		
656	900	11.18	-11.24		
657	775	25.30	-24.90		
662	840	0	0		
731	780	3.38	-2.75		
753	729	8.27	-8.12		
754	616	5.90	-5.77		
756	722	17.35	-16.45		
646		35.80	-35.58		
758	740	24.50	-24.05		
759	750	20.12	-19.75		
760	810	22.25	-22.00		
761	780	13.80	-13.70		
762	810	8.77	-8.45		
763	815	12.41	-11.99		
764	810	12.22	-15.93		
765	800	13.30	-13.18		
766	800	9.96	-9.22		
767		19.84	-19.52		
768	713	16.84	-15.70		
769	710	13.84	-13.74		
770	710	12.24	-11.90		
771	712	16.82	-16.22		
772	708	13.06	-12.80		
773	735	33.84	-33.61		
774	770	14.55	-14.33		
775	728	21.70	-19.90		
1101		47.80	-47.50		
1265		27	-16.00		

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau de plézométrique (m)	Débit (l/s)	Coordonnées (km) X Y
2777	617	28.54	588.61		
1285	611	41.63	569.70		
1296	620.20	35.83	587.20		
1313	611.75	32.01	583.03		
1322	647	54.84	593.44		
1339	603.90	35.20	574.90		
1340	680	16.90	666.42		
1374	629	45.05	584.40		
1704	646	56.07	590.05		
2710	798	16.24	782.32		
2771	628	44.42	586.78		
2737	830	7.83	822.83		
1762	642.5	44.60	598.00		
2712	840	7.90	833.30		
2723	800	3.75	797.75		
2713	760	19.70	740.48		
1714	623.20	41.60	583.75		
2714	780	10.70	770.95		
274	622	37.95	585.65		
2715	850	0	0		
2724	810	0	0		
1726	629	43.23	586.84		
2772	632	45.00	587.50		
2717	740	11.05	729.00		
2773	650	59.29	502.90		
2725	820	7.15	814.55		
2827	630	36.33	596.73		
323	618.50	33.20	586.15		
2719	765	9.95	755.50		
2720	830	14.02	816.45		
2828	640	45.72	596.19		
2776	615	31.36	584.18		
2809	610	26.86	586.80		
1278	613.65	36.34	580.97		
1273	616.25	40.51	576.25		

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau plézométrique (m)	Débit (l/s)	Coordonnées (km) X Y
2808	615	33.05	583.03		
1713	614	34.90	580.44		
2807	612	27.25	587.15		
1392	613.65	35.85	584.45		
1845	613.60	34.36	582.34		
2806	609	24.41	586.20		
2805	612	30.50	585.75		
2829	627	36.76	591.60		
2727	848	8.75	839.50		
2728	850	6.70	843.40		
2830	615	30.32	585.16		
738	780		775.30		
2831	615	27.57	587.74		
2731	850	35.10	813.06		
2732	950	0	0		
2733	840	17.30	822.90		
2834	616	32.32	584.52		
2833	616	41.75	584.50		
2398	760	9.20	754.20		
2832	615	29.10	586.00		
1702	618.50	36.96	584.93		
757	730	18.05	712.12		
2734	800	7.64	793.45		
2735	800	14.92	786.24		
2836	614	26.75	588.20		
2837	614	46.02	590.05		
2736	820	14.60	806.50		
2838	614	27.43	587.63		
2738	798	7.86	790.24		
386	609.40	34.02	580.90		
627	710	15.42	694.81		
2839	639	28.41	614.90		
2740	765	18.50	748.00		
252	641.11	28.62	617.13		
776	780	12.00	769.03		

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau de plézométrique (m)	Débit (l/s)	Coordonnées (km) X Y
2742	758	15.30	745.70		
2786	622	36.68	585.65		
2744	755	16.97	738.70		
2745	750	6.56	743.80		
2843	620	59.15	-46.02		
2842	624	37.80	586.80		
812	860	0	0		
2840	649	24.94	624.06		
2746	750	10.28	739.90		
2747	746	7.40	738.86		
813	835	26.52	808.58		
2749	740	4.65	735.60		
333	645.50	53.64	592.98		
814	830	21.20	808.88		
1385	643	54.22	588.80		
2750	643	53.71	590.12		
2751	642.70	52.03	591.00		
2752	640	52.14	589.49		
2753	639	50.40	589.06		
2755	637	43.63	593.39		
2756	637	43.40	593.95		
339	633	40.55	592.95		
2757	643	49.90	593.57		
2758	646	50.05	595.95		
1866	647	51.08	597.00		
815	828	18.08	809.94		
2760	636	51.80	584.87		
2761	639	58.10	581.20		
653	812	15.70	796.40		
278	810	17.37	792.90		
2653	809	10.35	798.70		
2763	623	33.70	589.49		
816	790	18.80	771.30		
2764	623	37.45	599.07		
277	620.80	35.52	586.53		

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau plézométrique (m)	Débit (l/s)	Coordonnées (km) X	Coordonnées (km) Y
1396	627	35.60	591.45			
1395	622.50	32.40	590.55			
2765	618	30.50	587.70			
2424	680	36.60	644.10			
2766	624	38.85	588.33			
2767	624	38.27	585.82			
2768	638	48.06	591.04			
333	646	52.70	593.40			
2851	730	5.40	727.30			
2849	680	14.38	666.20			
2754	638.50	51.70	587.93			
2769	632	41.52	590.60			
2698	730	33.09	697.17			
652	780	25.87	761.75			
2846	673	20.21	653.00			
2655	772	21.41	754.15			
655	780	13.95	766.44			
817	840	10.49	829.83			
818	835	0	0			
819	840	5.92	834.83			
820	835	0	0			
821	840	6.20	833.90			
822	770	15.10	757.02			
2662	790	15.45	774.80			
2663	786	12.26	773.87			
2845	692	11.80	680.34			
2687	745	4.14	740.96			
2689	690	36.90	655.75			
2667	800	10.87	789.47			
431	700	38.17	664.85			
2207	830	7.60	822.90			
1087	776	8.97	768.87			
2669	790	2.75	788.57			
2670	790	7.68	782.50			
2671	791	6.60	784.65			

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau de plézométrique (m)	Débit (l/s)	Coordonnées (km) X Y
2672	791.50	7.65	783.95		
839	755	4.10	751.35		
824	745	10.45	734.65		
2844	690	37.50	663.75		
825	740	34.80	705.65		
826	740	39.90	708.40		
841	740	42.00	698.48		
827	780	10.05	770.00		
828	753	6.47	746.63		
837	764	28.25	735.80		
666	760	31.15	729.20		
830	770	31.30	739.55		
829	760	28.20	-731.84		
840	780	28.53	751.60		
831	760	23.27	736.75		
833	880	28.55	751.55		
832	765	29.80	736.35		
2688	748	39.50	713.67		
834	694	49.05	647.78		
430	770	8.14	762.82		
2691	700	45.90	655.90		
2692	713	38.50	674.68		
734	765	0	0		
2694	714	28.06	686.17		
835	739	26.57	712.60		
838	770	15.15	754.98		
836	772	12.35	760.32		
428	770	6.90	763.50		
2305	740	0	0		
242	610	30.58	586.74		
1716	624.50	35.96	588.84		
2700	742	20.86	721.29		
2701	743	30.69	712.52		
2191	770	17.65	752.81		
2702	770	8.15	762.08		

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau plézométrique (m)	Débit (l/s)	Coordonnées X	Coordonnées Y (km)
2703	761	17.61	743.55			
1330	611	29.60	584.30			
2420	750	21.15	729.17			
2421	752	14.65	737.86			
2705	750	11.12	741.10			
2707	770	29.17	742.40			
2708	850	16.84	834.30			
2709	850	18.05	832.22			
1932	616	30.26	586.43			
311	615	30.18	586.20			
1711	611	29.38	586.96			
1358	613.63	33.95	586.28			
1317	612	40.74	572.02			
2796	616	38.35	588.27			
2797	613	31.26	585.43			
192	615	29.10	586.25			
2779	625	39.03	586.40			
1730	625	41.66	584.12			
2798	608	25.63	584.50			
2780	625.50	41.61	584.69			
2781	629	41.17	588.19			
258	605	28.80	582.14			
2782	625	36.51	588.52			
1830	615	37.70	577.47			
2783	625	35.12	592.78			
2784	614	34.91	580.90			
1949	614	33.35	581.90			
1121	638	44.29	597.12			
2802	609	26.60	584.86			
382	608	25.26	584.00			
1283	612.95	29.70	586.55			
2804	609	24.24	586.44			
808	800	12.59	797.47			
2826	689	11.10	678.10			
2825	708	22.05	686.40			

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau Niveau de plézométrique (m)		Débit (l/s)	Coordonnées (km)	
			X	Y		X	Y
2824	710	14.22	696.38	-13.62			
2788	619	33.53	586.85	-32.15			
2822	720	23.25	697.72	-22.28			
2789	615	35.45	685.20	-29.80			
2848	690	19.25	670.85	-19.15			
2821	630	37.10	594.70	-35.30			
2820	627	40.18	587.00	-40.00			
2847	616	23.10	599.55	-16.45			
2819	632	44.90	587.54	-44.46			
2818	630	43.64	586.57	-43.43			
2812	612	29.00	586.00	-26.00			
2816	615	30.80	584.89	-30.21			
2815	615	35.12	581.92	-33.08			
2814	609	27.04	585.53	-23.47			
1956	607	30.83	579.20	-27.80			
1955	609	28.46	581.66	-27.34			
2799	610.50	36.45	585.65	-24.85			
751	730	8.20	722.10	-7.90			
2801	611	32.39	585.60	-25.40			
752	728	8.27	720.03	-7.97			
1360	607.76	23.24	585.14	-22.62			
246	611.75	33.13	582.63	-29.12			
1863	614.70	31.93	585.67	-29.03			
2811	612	32.65	585.26	-26.74			
1364	610.50	28.50	585.15	-25.35			
1365	609	28.70	584.15	-24.85			
1332	607.50	23.60	584.30	-23.20			
2810	606	23.47	583.85	-22.15			
332	610.20	27.60	585.30	-24.70			
1271	610	30.30	684.83	-25.17			
1287	616.60	32.23	586.19	-30.41			
2790	621.00	34.50	586.60	-34.40			
2792	624	42.40	585.75	-38.25			
2793	621	35.30	586.76	-34.24			
2794	621	39.12	584.46	-36.54			

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau plézométrique (m)	Débit (l/s)	Coordonnées (km) X Y
2795	616.50	34.08	585.31		
625	740		711.00		
631	719		693.10		
601	790		776.00		
2674	745		743.10		
1086	750		732.80		
2423	742.50		728.70		
1966	642.20		591.10		
2677	770.00		728.05		
1958	625.00		588.65		
2771	628.00		584.60		
2778	620.00		560.00		
2779	615.00		586.20		
1368	643.00		597.00		
1949	611.19		586.09		
1378	612.00		581.00		
1341	612.00		592.70		
1281	610.05		596.05		
1721	624.00		588.40		
1371	618.00		587.40		
2840	649.00		613.20		
1359	671		622.20		
1948	614.50		589.25		
1081	614		587.90		
1329	619		591.00		
1719	613		589.10		
385	614		589.50		
1270	610		590.70		
1390	615		587.80		
1376	621		585.60		
1269	618		586		
1933	631		597.50		
1839	610		584.70		
682	605		585.85		
823	770		762.70		

Données des points d'eau: Cercle d'Oujda

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau plézométrique (m)		Débit (l/s)	Coordonnées (km)	
			Niveau de	Niveau plézométrique		X	Y
2303	688		634.20	-53.80			
275	620		585.75	-34.25			
1391	626		586.80	-39.20			
2642	631		579.75	-43.63			
634	735		710.10	-34.90			
750	750		731.90	-18.10			
747	725		717.10	-7.90			
2726	850		834.80	-15.20			
2635	638		594.37	-51.25			
1	700	37	669.00	-6.00		782.050	440.450
2	691	32	660.00	-1.00		781.050	440.250
3	684	37	652.00	-5.00		780.000	444.050
5	679.50	37	648.50	-6.00		780.470	440.800
7	681	40	647.00	-6.00		781.370	441.970
8	680.50	38	644.50	-2.00		781.280	441.640
10	670	37	639.00	-6.00		780.335	441.940
11	678	45	645.00	-12.00		781.275	442.440
12	675.50	45	642.50	-12.00		781.140	442.715
13	654					779.575	443.830
14	650	30	622.00	-2.00		779.275	444.105
15	646.20	27	620.20	-1.00		779.100	444.285
16	642.50	26.50	617.00	-1.00		778.800	444.435
17	665	27	642.00	-4.00		779.400	441.679
18	661	25	637.00	-1.00		778.700	441.700
19	661.50	30	638.50	-7.00		778.560	441.450
20	662.50	32	632.50	-2.00		778.300	441.350
21	645.60	25	623.60	-3.00		778.090	443.420
22	649.40	25	621.40	-1.00		778.209	443.760
23	644.80	26	620.80	-2.00		778.550	443.980
2877	868	115	825.50	-42.50	6	805.000	433.200
2879	908	169	830.20	-77.80	2	801.250	433.200
2881	930	145	848.00	-82.00	2	791.300	428.400
2946	930	450	815.00	-115.00	1	791.900	428.400

Données des points d'eau: Cercle de Taourirt

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau Niveau de plézométrique (m)	Débit (l/s)	Coordonnées (km) X Y
850	572	101	569.50	30	765.55 448.4
851		25	-8	20	730.55 427.45
852		25	-8	20	730.65 427.4
222		120	-38	2	711.100 391.100
112		670	-105	3	723.000 389.000
96		80	-38	2	706.050 386.900

Données des points d'eau: Cercle de Jerada

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau plézométrique (m)	Débit (l/s)	Coordonnées (km) X Y
1	920.66	90	923.46	78	
56	920.31	254.80	923.86	72	
57	921.49	250.60	923.98	52	
58	919.93	475	922.68	28	
63	920.04	243.40	922.84	70	
68	919.88	200	922.88	75	
59	891.02	456	929.19	41	
61	894.51	332.21	927.51	16.2	
64	903.34	285	925.34	141	
65	907.65	220	925.65	150	801.780 392.700
187	920	300	920.85	160	
188	920	300	921.08	150	
66	1074.69	692	929.88	3	784.200 366.300
26	1076	367	936.00	5	794.090 357.290
67	1084	460	949.00	(0.1/min)	
36				22	
170				60	
3				9	
7		110		1.5	821.500 351.700
23		388		3	779.930 355.760
28	950.794	118		4	799.350 386.250
54	1049	400	927.00	3	790.145 382.900
171	978	360	923.00	10	815.500 371.500
172	1103	300	917.00	5	837.500 371.500
37	900	343	944.00	35	809.400 394.600
179				64.7	
181				5.6	
182				13	
159	904.82	180		95	801.300 393.250
180	908	342		100	801.050 393.200
24	1089	295	950.00	4	831.200 357.300
45	986		924.00		
5	1058		913.00		
10	1061		908.00		
9					

Données des points d'eau: Cercle de Jerada

N° d'ouvrage	Altitude (m)	Profondeur total (m)	Altitude de Niveau Niveau de plézométrique (m)	Débit (l/s)	Coordonnées (km) X Y
13					
17					
25	1146		956.00		
12	1206		1077.00		
20					
11	1131		920.00		
19	1071		938.00		
27	952.92		944.00		817.000 379.500
40					
157		369			806.500 364.000
18					
26					
86	1077		932.00		
145					
29	950		920.00		
4					
32					
2					
15					
55	1041	220	926.00	3	790.800 389.400
62	895.63	393		5	806.240 392.700
46	937.13	25.15			802.700 389.950
22	1098		941.00		
35					
39					
30	1150		945.00		
34					
42					
80	1092		936.00		
186	1056	301	934.00		821.450 384.860
184	1036	400	1016.00		822.900 395.200
185	1067	300	977.00		834.000 396.000
21					
162	944.95	47.84			812.200 387.100

DONNEES DES POINT D'EAU (1) : cercle d'Oujda

N° d'ouvrage	Communes Rurales	Désignation	Coordonnées		Profond total (m)	Débit (L/s)	Niveau piézométr rique (m)	Diamètre (m)	Moteur		Type de la pompe	Observations
			X	Y					Marque, type	Puissance		
Puits==												
A 15	Ain Sfa	Nouv.Puits A.Sfa	798,000	467,000	14,70	5	11,60	1,60	Leroy'somer ,	7,5	Rovati	Bon état
A 14		Encien Puits A.Sfa	789,000	467,000	32	2	31,60	1,60	Petter , PH 2	12,5	Ahdi	ABPESfondir le
A 18		Hassi Bessara	791,900	459,000	34	3	33,40	1,80	Same , 1052	36	Rovati	ABPES
FORAGE==												
A 3	Beni Drar	Beni Drar-Centre	811,250	478,100	43	20	42,60	1,80	Leroy'somer,	30	Grund Fos	Débit insuffissat
A 2		Hassi Azizân	810,100	477,100	36	3	35,40	1,20	Lister , HB 3	27	Alta	Bon état
A 4		Hassi Jdâini	813,100	480,000	26	3	25,40	1,60	Same , 1053	27	Rovati	Bon état
A 1		Hassi Guerbouz	808,700	483,700	32	2	31,60	1,80	Lister , SR 2	13	Ideal	Débit insuffissat
A 5	Sidi Yahya	PKB route Abfir	816,860	467,060	65	5	64,40	1,60	Petter , PH 2	12,5	Rovati	Bon état
A 6		Hassi Houvara	819,920	471,050	32	2	33,40	1,60	Petter , PH 2	12,5	Grund Fos	Bon état
A 9		Hassi Snaina	815,200	461,600	17	7	16,40	1,60	Petter , PH 2	12,5	Rovati	Bon état
A 7		Zouj Beghat	828,430	470,510	20,10	6	19,50	2,00	Leroy'somer,112M/2	7,5	Rovati	Bon état
A 8		Hassi El Mekki	830,150	462,480	27	4	26,40		Same , 1052	25	Rovati	Bon état
A 25		Bouchtat	829,500	459,000								
A 11	Naima	Hassi Sania	807,910	455,800	26	3	25,40	1,60	Same , 1052	22	Rovati	Bon état
A 10		Hassi Raken	809,300	457,350	23	6	22,40	1,40	Same , 1052	27,5	Grund Fos	Bon état
A 22	Tiouli	Hassi Chria	827,250	425,955	4	3	3,60	1,60	Petter , PJ 3	25	Rovati	Bon état
A 21		Oued El Himer	823,000	435,000	24	1	23,60	1,60	BOLINNE			En panne
A 24	Touissit	Hassi Tazougaret	830,200	442,300								
A 20	Nestferki	Hassi Rosfa	785,000	440,500	57	7	56,60	1,60		25	Ahdi	
A 13	Ain Sfa	Hassi Boussir	802,000	467,000	113	2	90	9"	Same , 1052	36	Grund Fos	Bon état
A 16		Tafaghant	794,800	460,200	150	3	40	9"	Same , 1052	25	Rovati	Bon état
A 17		Béni Mimoun	800,000	459,000	180	2	132	7"	Same , 1052	27,5	Aturia	Bon état
A 12	Sidi Yahya	El Hammel	812,500	464,550	125	1	115	8"	Stter ,	13	Grund Fos	En panne
A 19	Naima	Béni Oukil Care	806,800	452,560	300	4	66	7"	Same , 1054	50	Grund Fos	Bon état
A 26	Tiouli	Tiouli Centre	827,400	429,400	500	3	172	9"	Berliet ,	80	Aturin	Bon état

DONNEES DES POINTS D'EAU (2) : cercle d'Oujda

N° d'ouvrage	Communes Rurales	Désignation	Coordonnées		Profond total (m)	Débit (l/s)	Niveau piézométrique (m)	Diamètre (m)	Moteur Marque, type, puissance	Type de la pompe	Observations
			X	Y							
SOURCE=											
S 1	Ain Sfa	Ain Sfa Sefrou	797,000	469,000		4					Bon état
S 2	Naima	Ain Tolba	806,150	445,700		1				Idéal	
S 3	Tiouli	Ain Sidi Aissa	832,405	427,235		1					
S 4	Touissit	Centre de Touissit	838,600	439,800							
S 5		Ain Sbaâ	836,700	439,700							
S 6		Ain Hadmene	839,700	438,860							
S 7		Ain Mokrane	834,600	440,600							
S 8		Ain Sidi Jaber	828,000	442,200							
S 9		Ain Tlbrionline	831,000	445,600							
S 10		Ain Atali	823,500	443,000							
S 11		Ain Kerma	822,400	440,800							
S 12		Ain Guernaz	823,800	440,000							
S 13	Westferki	Ain Tabourit	391,200	435,700		3					
S 14		Bassi Lahmar	791,400	438,200		2					
S 15		Ain Hina	793,600	439,000		1					
S 16		Ain Moutcer	789,700	437,800							
S 17		Bassi Laïla	795,600	442,900							
S 18		Ain Metlili	792,700	440,700							
S 19		Ain Mejnoun	796,800	443,100							
S 20		Ain N'sar	802,000	440,100							
S 21		Ain Tanezert	799,100	434,100							
S 22		Ain Noufafsils	800,600	434,600							
S 51		O.Aïl Ben Yahya	805,000	443,300							

DONNEES DES POINTS D'EAU (3) : cercle d'Arourirt

N° d'ouvrage	Communes Rurales	Désignation	Coordonnées		Profond total (m)	Débit (l/s)	Niveau Piédométrique (m)	Diamètre (m)	Moteur Marque, type, Puissance	Type de la pompe	Observations
			X	Y							
A 8b	El Aloun	Hassi Bachir	771,000	449,000	12	2	11,40	1,40	EOLIE		
A 7b		Ras Bourdim	778,300	452,000	32	2	31,50	1,60	EOLIE		En panne
A 5b		Ouled Braz	777,000	445,800	33	1	32,60	1,00	Petter, PH 2, 12,5	Grund Fos	Bon état
A 6b		Bouamama	775,000	449,000	23	2	22,60	1,40	EOLIE		En panne
A 4b		Hassi Kadda	774,000	448,000	27	1	26,40	1,40	EOLIE		En panne
A 2b		Batnat Jamaa	779,600	446,000	32	3	31,60	1,60	Lister, SR 2, 13	Ideal	Bon état
A 3b		- dito -	778,300	446,000	55	2	54,60	1,60	EOLIE		n panne
A 27		Hassi Boumaha	769,500	437,600	35	1			EOLIE		En panne
A 28		Ain Tanouralt	759,500	424,100	13	0,5		1,60			
A 10b	Mestigneur	Hassi Sidi Okba	749,000	450,500	16	2	15,60	1,20	EOLIE		En panne
A 13b		Hassi Kohachta	743,000	427,500	43	2	42,50		Petter, PH 2, 12,50	Grund Fos	Bon état
A 11b	Mechraa Hammahi	Dar Caid Amar	749,000	452,000	32	2	31,50	1,20	EOLIE		Bon état
A 30		Oued Bourdim	761,700	450,600	9	5	8,50	1,20		Andi	
A 31		Maksem Jir	736,000	450,200	4	2	3,50	1,20		Rovati	
A 32		Hassi S1.Okba	750,200	446,200	18	1	17	1,40	EOLIE		
A 12b	Tencherfi	Hassi Sekoume	756,000	432,000	41	1	40,60	1,40	Petter, PH 2, 12,50	Rovati	Bon état
A 14b		Souk Khmis	753,500	427,000	13,50	3	13	1,40	Lister, SR 2, 24	Andi	Bon état
A 16b	Gouttitir	Oued Tlech	706,000	413,000	32	1	31,50	1,20	Lister, SR 2, 13	Alta	Bon état
A 15b		Hassi Gouttitir	714,000	420,500	13,50	2	13,00	1,40	Petter, PJ 1, 8,5	Rovati	Bon état
A 17b		Hassi Tourch	716,000	405,000	13	2	12,60	1,20	EOLIE		Bon état
A 19b		Hassi Chouali	727,000	397,000	55	1	54,60	1,40	Lister, HR 2, 24	Grund Fos	Bon état
A 33		Melo El Ouldene	716,500	441,100	6	2	5,50	1,40		Rovati	
A 34	Ahl Oued Za	Béni Chbel	753,000	403,900	9	6	8,60	1,50		Rovati	
		- dito -	- dito -	- dito -	- dito -	5				Ideal	
A 20b	Debdou	Hassi Tafzata	702,500	379,000	30	1		1,40			Non équipé
A 21b		Hassi Alouana	707,800	378,000	14	1		1,20			Non équipé

D) NNEES DES POINTS D'EAU (4) : cercle d'Atourirt

N° d'ouvrage	Communes Rurales	Désignation	Coordonnées		Profond total (m)	Débit (l/s)	Niveau piézométrique (m)	Diamètre (m)	Moteur	Type de la pompe	Observations
			X	Y					Marque, type, Puissance		
FORAGE==											
A 9b	El Aioun	Tabouabane	776,000	448,000	150	12		9"	Lister, SR 2, 36	Ideal	Irrigation
A 1b		Batmat Jamaa	779,000	447,000	150	3		9"			Non équipé
A 18b	Gouttitir	Oglat Naaaja	709,000	402,000	42	5	19,50	9"	Same, 1053, 36	Aturia	
SOURCE==											
S 27	El Aioun	Oued Irsane	768,500	436,500	4	6	3,60			Rovati	
S 28	Mestigmeur	Source mestigmeur	745,600	434,400		20					Irrigation
S 29		Ain Mizab	749,200	438,100		8					
S 30		Ain Metlili	751,900	434,600		2					
S 31		Ain M'drar	754,000	438,000							
S 32	Mechraa Hammadi	Massine	766,600	461,600		2					
S 33		Ain S.Youssef	748,200	455,800		2					
S 34		Ain Tazatcha	761,400	461,800		1					
S 35	Tencherfi	Ain Dada Ali	760,900	412,800		2	1,00				
S 36			789,100	420,800		0,50	1,00				
S 37			756,900	413,400		15					
S 38			763,600	419,700		10					
S 39			756,400	421,500		3					
S 40			730,000	364,000		4					
S 41			718,500	368,200		4					
S 42	Ahl Oued Za	Ain Ramou	732,350	416,200		15					
S 43	Debdou	Ain Ouméne	723,400	387,300		8					Irrigation
S 44		Ain Tafraout	718,000	377,000		20					
S 45		Ain Talazert	736,000	388,000		2					Non aménagé
S 46		Ain Sagane	716,100	385,000		2					Non équipé
S 47		Ain Alouana	708,500	380,200		2					Irrigation
S 48		Ain Ouled Tayane	707,100	373,700		8					Non aménagé
S 49		Ain scbab	710,500	382,100		2					
S 50		Ain Salaouit	724,600	383,300		4					

DONNEES DES POINTS D'EAU (6) : cercle d'Jerada

N° d'ouvrage	Communes Rurales	Désignation	Coordonnées		Profond total (m)	Débit (l/s)	Niveau piézométrique (m)	Diamètre (m)	Moteur Marque, type, puissance	Type de la pompe	Observations
			X	Y							
PUISES==											
A 30	A.B.Mathar	Hassi Laabid	813,500	400,500	31	2	30,60	1,60	Petter, PJ 1, 8,5	Alta	Bon état
A 35		Hassi Ouzienne	815,500	391,000							
A 25a		Ouglat Habara	839,300	363,000	25	1	24	1,60	BOLLIENNE		En panne
A 37		El Admet	832,890	383,690	55	1	1				
A 29a		Oued El Oglat	831,000	398,000	55	1	54,60	1,60	, 6,5	Grund Fos	
A 23a		Doughmania	838,100	381,690	55	1	54,60	2,00	Petter, PH 1, 12,5	Rovati	Bon état
A 22a		hassi Siblia	836,000	385,000	33	2	32,50	1,60	BOLLIENNE		En panne
A 28a		Ouzienne	807,850	400,000	23	2		1,40			Non équipé
A 16a	Merija	Centre Merija	779,900	384,000	4,60	4	4		Lister, SR 2, 13	Forget	Bon état
A 17a		M'sidira	766,500	384,000	35	1	34,60	1,60	Petter, PJ 1, 6,5	Rovati	Bon état
A 18a		Hassiane Diab	757,000	375,400		1					Non équipé
A 8a	Guefait	Souk Guefait	780,000	410,000	14,50	3	14	1,60	Petter, PH 1, 6,5	Rovati	Bon état
A 1a	El Ouinet	Moul Zebbouja	812,380	440,855	28	1	27,60	1,20	Lister, SR 2, 6,5	Alta	En panne
A 2a		Hassi Boussaïd	808,800	438,400	12	2	11,80	1,60	BOLLIENNE		Bon état
A 3a		Lamsaâda	812,980	436,740	13	4	12	1,20	Petter, PJ 2, 17		Bon état
A 4a		Faddane Labiad	814,000	439,000	13	1	12,60	1,20	BOLLIENNE		Bon état
A 5a		Guenfouda Centre	807,770	436,975	6	2	5,80	1,20	Petter, PH 1, 6,5	Rovati	Bon état
A 6a		Hassi Hajja	806,000	403,000	14	2		1,40			Non équipé
A 7a		Hassi Allouda	815,000	431,000	33	0,5		1,40			Non équipé
FORAGE==											
A 9a	A.B.Mathar	C.T	804,500	402,600	80	30		9"			Artesien
A 19a		Rabt Tahtani	799,350	386,250	118	4	94	7"	Lister, SR 1, 6,5	Ideal	
A 38		Khat Jebbouri	806,500	364,000	369						
A 39		Sehb Sedra	827,000	371,400	182	4,40		7"	, 50	Auria	
A 21a		Guelb El Haoud	818,400	380,000	115	2	48	9"	BOLLIENNE		En panne
A 20a		Nkhila	814,000	370,000	91	9	46	9"	Dorman, DT 4, 80	Grund Fos	En panne
A 40	Oulad	Zniza	839,500	371,500	300	5					Bon état
A 26a		Jnane Mekhtour	831,200	357,300	295	4	160	7"	Lister, HR 4, 43	Grund Fos	Bon état
A 27a		Dhar El Gaâg	821,500	351,700	110	1,5	70	7"	Lister, SR 2, 10	Pleuger	Bon état
A 24a		Sehb Sedra	841,200	372,500	380	4	182	7"	Same, 1058, 50	Auria	Bon état

DONNEES DES POINTS D'EAU (8) : cercle d'Berkane

N° d'ouvrage	Communes Rurales	Désignation	Coordonnées		Profond total (m)	Débit (l/s)	Niveau Piézométrique (m)	Diamètre (m)	Moteur Marque, type, puissance	Type de le pompe	Observations
			X	Y							
PUITS==											
A 41	Rislane	Ancien puits	771,800	466,400	35	2	34,40	1,20	, 19	Tubax	Débit insuffissant
A 42		Nouveau puits centre	771,600	466,400	42	2	22	1,60			Non équipé
A 43		Hassi Irzain	776,550	460,700	65	0,5	64,40	1,60	, 12	Grund Fos	Débit insuffissant
A 44	Taforalt	Ancien puits centre	772,800	471,300	13	3	12,60	1,60			Bon état
A 45		Nouveau puits centre	772,780	471,300	15	5	14,60	1,60	, 16	Pleuger	Bon état
A 46		Barraba	781,800	456,100		0,40					En panne
FORAGE==											
A 47	Rislane	Oum Laghaz	774,000	461,800	289	4		8"1/2	, 13	Aturia	Bon état
A 48	Taforalt	Sidi Bouhouria	777,350	461,800	255	6	150	9"	, 44	Aturia	
SOURCE==											
S 58	Rislane	Ain Tijouine	770,600	465,300		0,5					
S 59	Taforalt	Ain Bouhouch	787,000	467,000		0,5					Bon état

DONNEES D'OBSERVATION DE PIEZOMETRES (1)

OUJDA , Sidi Bou Houria

An . M	IRE	3 3 7	1 1 0 0	1 2 7 4	1 3 6 7
		(m)	(m)	(m)	(m)
1 9 6 8	9	3 4.6 6	—	3 0.5 3	3 7.0 8
	1 0	—	—	—	—
	1 1	—	—	—	—
	1 2	—	—	—	—
1 9 6 9	1	3 6.5 0	2 1.2 2	2 8.0 0	3 8.3 3
	2	—	—	—	—
	3	3 3.7 1	2 0.8 9	2 7.8 6	3 8.9 7
	4	3 3.1 8	2 0.6 3	2 7.6 4	3 8.9 5
	5	—	—	—	—
	6	3 3.9 8	—	2 8.6 1	3 9.7 5
	7	3 4.2 5	—	2 9.2 8	4 0.2 7
	8	3 4.6 4	—	3 0.2 6	4 1.1 1
	9	3 5.0 7	—	3 0.6 8	4 2.0 8
	1 0	3 5.1 7	2 2.9 0	3 0.5 0	4 2.5 0
	1 1	3 6.2 0	2 2.8 2	2 9.9 6	4 2.5 5
	1 2	3 5.2 0	2 2.5 6	2 9.3 7	4 2.1 6
1 9 7 0	1	3 4.6 8	2 1.9 9	2 8.5 0	4 1.1 8
	2	3 5.1 0	2 1.9 3	2 8.6 5	4 1.1 3
	3	3 4.9 5	2 1.6 4	2 8.5 9	4 0.7 4
	4	3 4.8 6	2 1.4 2	2 8.7 4	4 0.6 0
	5	3 5.1 7	2 1.5 4	2 8.7 4	4 1.1 4
	6	3 5.3 6	—	2 9.7 8	4 1.6 4
	7	3 5.6 3	2 2.2 1	3 0.5 3	4 2.1 7
	8	3 6.0 5	—	3 1.1 4	4 3.0 0
	9	3 6.1 3	—	3 1.3 5	4 3.5 1
	1 0	3 5.7 3	—	3 0.8 3	4 3.3 4
	1 1	3 6.4 4	—	3 0.1 9	4 4.3 0
	1 2	3 6.5 5	2 3.5 6	3 0.1 9	4 4.2 6
1 9 7 1	1	3 6.6 0	2 3.4 4	3 0.1 4	4 4.6 3
	2	3 6.6 2	2 3.3 0	2 9.7 5	4 4.6 4
	3	3 6.6 6	—	2 9.7 0	4 4.5 4
	4	3 7.7 8	2 4.9 5	3 1.9 0	4 4.8 5
	5	3 7.0 0	2 3.2 2	2 9.9 3	4 5.0 8
	6	3 7.1 2	2 3.2 2	3 0.3 8	4 4.0 1
	7	3 7.3 9	—	3 1.3 7	4 4.2 4
	8	3 7.4 5	—	3 1.6 7	4 4.7 2

.../...

DONNEES D'OBSERVATION DE PIEZOMETRES (2)

An . M	IRE	3 3 7	1 1 0 0	1 2 7 4	1 3 6 7
1 9 7 1	9	3 7.5 8 ^(m)	— ^(m)	3 2.0 0 ^(m)	4 5.1 8 ^(m)
	1 0	3 7.6 5	—	3 2.0 6	4 5.5 2.
	1 1	—	—	—	—
	1 2	—	—	3 0.9 7	—
1 9 7 2	1	3 7.4 4	2 4.7 1	3 0.4 0	—
	2	3 7.4 5	2 4.6 0	3 0.1 7	4 4.9 9
	3	3 7.7 5	2 4.5 5	3 0.0 2	4 4.8 7
	4	3 7.8 2	2 4.3 1	2 9.8 8	4 4.6 3
	5	3 7.8 1	2 6.0 9	3 0.5 5	4 4.5 9
	6	3 7.9 2	2 4.7 0	3 1.0 0	4 4.9 7
	7	3 7.4 5	2 5.5 0	3 0.4 5	4 5.8 1
	8	3 7.6 3	2 5.5 3	3 1.7 8	—
	9	—	—	—	—
	1 0	3 7.9 4	2 5.8 0	3 8.2 0	—
	1 1	3 7.7 0	2 5.7 0	3 1.4 3	—
	1 2	3 8.7 0	2 6.1 0	3 1.5 7	—
1 9 7 3.	1	3 8.7 5	2 6.3 0	3 1.2 5	—
	2	3 8.5 0	2 6.1 0	3 1.1 8	—
	3	3 8.5 0	2 5.7 0	3 0.6 0	—
	4	3 8.7 3	2 6.7 0	3 0.7 7	4 4.8 4
	5	3 8.2 7	2 5.5 0	3 0.4 7	4 4.5 4
	6	3 8.5 0	2 5.5 0	3 0.6 0	4 4.6 9
	7	3 8.3 0	2 4.9 7	3 0.8 5	4 4.8 4
	8	3 7.9 0	2 6.7 5	3 2.2 5	—
	9	3 7.8 5	—	3 2.3 0	—
	1 0	3 7.8 5	—	3 2.2 5	—
	1 1	3 8.0 5	2 6.5 0	3 2.3 5	—
	1 2	3 8.0 0	2 6.3 2	3 1.5 0	4 4.9 4
1 9 7 4	1	3 7.6 8	2 6.0 0	3 1.2 2	4 4.6 2
	2	3 7.5 5	—	3 1.0 2	4 4.3 4
	3	3 7.5 0	2 5.6 6	3 0.4 5	4 0.7 5
	4	3 7.0 8	2 5.2 3	2 9.9 8	3 8.9 4
	5	3 6.9 5	2 5.1 0	3 0.0 0	3 8.7 4
	6	3 6.3 3	2 4.6 2	3 0.5 7	3 7.1 4
	7	3 6.1 0	—	3 0.3 0	3 6.9 4
	8	—	—	—	—
	9	3 5.5 8	2 4.6 0	3 1.3 0	3 7.3 4
	1 0	3 5.2 3	2 4.4 7	3 0.9 5	3 7.9 5
	1 1	3 4.6 4	2 4.1 9	3 0.0 0	3 8.0 5
	1 2	3 4.7 4	2 3.7 6	2 9.6 7	3 8.4 6
1 9 7 5	1	3 4.5 7	2 3.4 5	2 9.6 4	3 9.1 1
	2	3 4.4 2	2 2.9 8	2 9.3 0	3 9.5 0

DONNEES D'OBSERVATION DE PIEZOMETRES (3)

An . M	I R E	3 3 7	1 1 0 0	1 2 7 4	1 3 6 7	
		(m)	(m)	(m)	(m)	
1 9 7 5	3	3 4.3 5	2 2.6 8	2 8.8 4	—	
	4	3 4.4 0	2 2.4 6	2 9.1 0	3 9.9 2	
	5	3 4.5 0	2 2.2 2	2 8.6 5	3 9.7 3	
	6	3 4.6 6	2 2.2 1	2 9.4 0	3 8.1 7	
	7	3 4.7 9	2 3.0 6	2 9.9 0	3 8.1 0	
	8	3 4.8 8	2 3.3 5	3 0.7 8	3 8.4 0	
	9	3 4.8 2	2 3.5 2	3 0.2 0	3 8.7 0	
	1 0	3 4.7 3	2 3.5 2	2 9.9 2	3 9.2 0	
	1 1	3 4.6 0	2 3.2 0	2 9.6 2	3 9.5 2	
	1 2	3 4.4 8	2 3.1 2	2 9.2 0	3 9.7 0	
	1 9 7 6	1	3 4.4 5	2 2.8 0	2 9.3 6	4 0.2 5
		2	3 4.4 0	2 2.4 7	2 8.8 7	4 0.5 0
3		3 4.4 0	2 2.1 7	2 8.7 2	4 0.8 0	
4		3 4.4 8	2 1.9 3	2 8.6 8	4 1.0 3	
5		3 4.5 0	2 1.9 0	2 8.7 8	4 1.0 2	
6		3 4.8 5	2 2.1 6	2 9.6 5	4 1.1 9	
7		3 5.2 7	2 2.8 0	3 0.2 7	4 1.5 3	
8		3 5.4 3	2 3.0 6	3 0.3 0	4 1.8 7	
9		3 5.5 1	2 3.1 6	3 0.2 5	4 2.2 7	
1 0		3 5.5 3	2 3.3 1	3 0.1 4	—	
1 1		3 5.6 3	2 3.0 4	2 9.7 3	4 2.9 6	
1 2		3 5.6 3	2 2.9 2	2 9.6 5	4 3.0 5	
1 9 7 7	1	3 5.7 2	2 2.6 0	—	4 3.2 5	
	2	3 5.7 7	2 2.5 0	2 8.8 5	4 2.8 0	
	3	3 5.8 3	2 2.2 5	2 9.5 2	4 2.8 4	
	4	3 5.9 6	2 2.3 0	2 9.8 0	4 3.0 5	
	5	3 6.2 5	2 2.8 5	3 0.1 0	4 3.6 5	
	6	3 6.4 5	2 2.9 6	3 0.4 5	4 3.8 0	
	7	3 6.6 5	2 3.3 5	3 0.8 9	4 4.2 6	
	8	3 6.9 7	2 3.9 0	3 1.0 7	4 4.9 6	
	9	3 7.2 5	2 4.2 5	3 1.0 0	4 5.4 5	
	1 0	3 7.4 0	2 4.4 5	3 0.8 3	4 5.7 2	
	1 1	3 7.4 1	2 4.4 0	3 0.4 0	4 5.4 8	
	1 2	3 7.4 5	2 4.4 4	3 0.3 5	4 5.2 8	
1 9 7 8	1	3 7.4 8	2 4.1 8	—	4 5.2 1	
	2	3 5.5 2	2 4.1 3	—	—	
	3	3 8.5 2	2 4.3 3	3 0.4 5	4 5.7 0	
	4	3 7.9 4	2 4.6 0	—	4 6.7 1	
	5	3 7.9 9	2 4.8 0	3 1.5 3	4 6.7 8	
	6	3 8.3 3	2 5.2 0	—	—	
	7	3 8.7 9	2 5.4 2	3 2.1 4	4 7.6 2	
	8	3 9.1 2	2 6.4 6	3 2.6 2	—	

DONNEES D'OBSERVATION DE PIEZOMETRES (4)

An . M		I R E	3 3 7	1 1 0 0	1 2 7 4	1 3 6 7
			(m)	(m)	(m)	(m)
1 9 7 8	9		3 9.3 1	2 6.5 8	—	—
	1 0		3 9.3 8	2 6.6 0	—	—
	1 1		3 9.3 5	2 6.7 5	3 2.6 4	—
	1 2		3 9.4 5	2 7.0 3	3 2.8 0	—
1 9 7 9	1		3 9.5 6	2 7.1 2	3 2.8 1	—
	2		—	—	—	—
	3		3 9.4 8	2 7.1 1	3 2.8 1	—
	4		3 9.7 0	2 7.5 0	3 2.6 2	—
	5		—	—	—	—
	6		—	—	—	—
	7		—	—	—	—
	8		3 9.9 8	2 3.6 3	3 3.0 7	—
	9		—	—	—	—
	1 0		—	2 9.1 0	3 4.1 0	—
	1 1		—	—	—	—
	1 2		4 0.0 0	2 8.2 0	3 4.0 0	—
1 9 8 0	1		—	—	—	—
	2		—	2 8.1 5	3 0.3 0	4 6.6 0
	3		3 1.0 0	—	2 9.6 7	4 5.7 1
	4		3 0.9 1	2 7.0 3	3 0.8 0	4 6.0 9
	5		3 9.9 0	2 6.8 0	3 0.6 0	4 5.0 0
	6		—	3 1.3 3	3 1.1 0	—
	7		—	—	—	—
	8		—	2 7.6 3	3 1.6 0	—
	9		—	—	—	—
	1 0		3 9.5 5	2 6.9 5	3 1.0 0	4 6.9 5
	1 1		—	—	—	—
	1 2		3 9.7 0	2 7.2 5	3 1.2 5	4 7.1 0
1 9 8 1	1		—	—	—	—
	2		3 8.7 2	—	—	—
	3		3 8.4 1	2 5.9 7	—	4 6.6 0
	4		3 8.3 8	2 5.9 0	2 9.5 6	4 6.6 2
	5		3 8.3 6	2 5.8 0	2 9.5 8	4 6.5 1
	6		3 9.2 0	2 6.4 5	3 0.0 0	4 6.7 0
	7		—	—	—	—
	8		3 8.9 0	2 6.5 5	3 0.2 4	4 6.8 0
	9		—	—	—	—
	1 0		3 8.0 0	—	—	4 1.4 7
	1 1		3 8.0 2	—	—	—
	1 2		—	—	—	—
1 9 8 2	1		3 8.0 0	2 3.8 9	2 9.5 9	—
	2		—	—	—	—

DONNEES D'OBSERVATION DE PIEZOMETRES (5)

I R E		3 3 7	1 1 0 0	1 2 7 4	1 3 6 7	
An . M		(m)	(m)	(m)	(m)	
1 9 8 2	3	3 9.0 5	2 4.2 0	3 1.9 5	4 3.7 0	
	4	—	—	—	—	
	5	4 0.0 9	2 4.8 0	3 1.0 0	4 4.0 0	
	6	3 7.0 6	2 5.1 0	3 2.5 0	4 5.3 2	
	7	3 6.1 0	2 8.4 4	—	4 4.8 6	
	8	3 7.0 6	2 5.1 0	3 2.5 0	—	
	9	—	—	—	—	
	1 0	—	—	—	—	
	1 1	—	—	—	—	
	1 2	—	—	—	—	
	1 9 8 3	1	3 4.7 8	2 7.9 0	3 3.8 6	4 6.7 0
		2	3 3.8 7	2 6.2 0	3 4.4 0	4 6.6 5
3		3 4.1 0	2 6.1 0	3 4.6 0	4 6.9 5	
4		3 4.2 8	2 6.6 0	3 5.0 0	4 7.1 8	
5		—	—	—	4 7.3 7	
6		3 5.0 2	2 6.3 6	3 5.7 0	4 7.7 5	
7		3 5.3 3	—	3 5.8 5	4 7.9 2	
8		3 5.5 7	2 8.0 3	3 6.0 4	4 8.1 5	
9		3 5.6 0	2 8.4 8	—	4 8.2 0	
1 0		3 6.2 0	2 8.7 0	—	4 8.2 2	
1 1		3 6.1 2	2 9.1 9	—	—	
1 2		3 5.9 6	2 8.8 6	—	—	
1 9 8 4	1	3 5.9 2	2 8.7 8	—	—	
	2	4 1.3 0	3 0.6 0	3 7.7 0	—	
	3	4 1.5 0	3 0.1 2	3 8.4 5	—	
	4	—	—	—	—	
	5	—	—	—	—	
	6	—	3 1.7 0	3 3.8 8	—	
	7	—	3 1.9 0	—	—	
	8	—	3 1.8 5	3 9.2 5	—	
	9	—	3 2.6 0	3 8.5 0	—	
	1 0	—	3 2.0 5	3 9.0 5	—	
	1 1	—	3 2.0 0	3 4.2 6	—	
	1 2	—	3 1.9 5	3 4.3 1	—	
1 9 8 5	1	—	3 2.3 5	3 4.0 5	—	
	2	—	3 2.4 1	3 4.1 7	—	
	3	—	3 2.4 4	3 8.6 4	—	
	4	—	—	3 5.4 5	—	
	5	—	—	3 5.3 0	—	
	6	—	—	3 6.2 5	—	
	7	—	—	3 6.7 0	—	
	8	—	3 4.4 0	3 6.6 0	—	

DONNEES D'OBSERVATION DE PIEZOMETRES (1)
OUJDA Angad IRE 616, 1218
Oulad-Arja, Oulad-Hamel IRE 1202, 1204
Sidi Yahia, Jebel Hamura IRE 1126

An . M	IRE	616	1218	1202	1204	1126
1968	9	19.46 ^(m)	6.83 ^(m)	7.03 ^(m)	5.53 ^(m)	— ^(m)
	10	—	—	—	—	—
	11	—	—	—	—	—
	12	—	—	—	—	—
1969	1	19.12	6.94	8.04	4.69	—
	2	—	—	—	—	23.12
	3	19.16	6.99	7.78	4.80	—
	4	18.89	6.96	7.10	5.09	—
	5	—	—	—	—	—
	6	19.10	7.08	7.24	5.20	—
	7	—	—	—	—	—
	8	19.09	7.18	7.99	5.80	—
	9	19.14	7.24	8.66	6.17	23.62
	10	19.12	7.24	9.14	6.25	—
	11	19.07	7.16	9.47	5.44	—
	12	19.02	7.16	9.04	5.84	—
1970	1	18.95	7.12	7.95	4.66	—
	2	19.00	7.10	7.30	4.93	23.77
	3	18.91	7.08	7.11	5.16	—
	4	18.87	7.11	7.15	5.03	—
	5	18.96	7.12	7.23	5.53	—
	6	18.94	7.14	7.51	5.74	—
	7	18.97	7.20	7.97	6.04	24.19
	8	18.84	7.22	8.65	6.67	—
	9	19.19	7.42	9.30	6.97	—
	10	18.84	7.17	9.64	7.15	—
	11	19.07	7.21	10.08	7.16	—
	12	19.08	7.18	10.42	7.32	—
1971	1	19.02	—	—	—	—
	2	18.96	7.13	10.79	6.50	24.26
	3	18.92	7.14	10.43	6.68	—
	4	18.87	7.17	—	—	—
	5	18.97	7.23	10.18	6.20	—
	6	18.89	7.23	9.09	5.93	—
	7	19.05	7.22	8.17	6.43	24.17
	8	18.86	7.26	8.31	7.26	—

.../...

DONNEES D'OBSERVATION DE PIEZOMETRES (2)

An . M \ I R E		6 1 6	1 2 1 8	1 2 0 2	1 2 0 4	1 1 2 6
		(m)	(m)	(m)	(m)	(m)
1 9 7 1	9	—	—	—	—	—
	1 0	1 8.9 7	7.2 5	9.5 3	7.5 2	—
	1 1	1 8.8 8	7.2 9	9.9 3	7.6 3	—
	1 2	1 9.0 2	7.1 5	1 0.1 7	6.0 6	—
1 9 7 2	1	1 8.6 8	7.0 8	9.3 0	6.0 5	—
	2	1 8.6 1	7.0 8	—	—	2 4.2 1
	3	1 8.9 4	7.0 7	7.9 9	5.6 3	—
	4	1 9.5 7	7.0 4	—	5.6 1	—
	5	1 8.8 7	7.0 5	7.1 5	5.9 5	—
	6	1 8.8 0	7.0 9	7.0 8	6.0 5	—
	7	1 8.2 7	7.1 0	7.3 8	6.5 8	2 4.1 0
	8	1 8.2 6	7.1 5	7.8 8	7.3 1	—
	9	1 9.0 7	7.1 7	—	8.0 0	—
	1 0	1 8.5 7	7.1 4	—	7.9 1	—
	1 1	1 8.5 2	7.1 0	—	7.4 3	—
	1 2	1 8.7 2	7.1 0	—	6.9 0	—
1 9 7 3	1	1 8.4 7	7.0 3	—	6.5 0	—
	2	1 8.6 2	7.1 0	—	6.4 7	2 4.1 7
	3	1 8.4 4	6.9 8	—	6.2 0	—
	4	1 8.4 4	6.9 2	—	5.6 1	—
	5	1 8.2 2	6.8 1	—	5.6 0	—
	6	1 8.1 4	6.7 8	—	6.0 1	—
	7	1 8.2 2	6.9 0	7.1 8	6.3 2	2 4.1 2
	8	1 8.0 7	6.9 1	—	7.1 3	—
	9	1 8.3 9	6.9 5	—	7.7 2	—
	1 0	1 8.2 2	6.9 2	—	7.6 5	—
	1 1	1 8.2 7	6.9 3	—	6.9 9	—
	1 2	1 8.2 7	6.9 2	—	7.2 1	—
1 9 7 4	1	1 8.0 7	6.5 6	—	6.0 1	—
	2	1 8.0 7	6.4 5	—	—	2 4.1 7
	3	1 8.1 2	6.3 4	—	—	—
	4	1 7.8 8	5.9 5	—	—	—
	5	1 7.7 2	5.8 0	—	—	—
	6	1 9.1 9	5.8 2	—	—	—
	7	1 7.0 2	5.8 5	—	—	2 4.1 2
	8	1 6.9 2	5.8 3	8.6 8	—	—
	9	1 7.0 7	6.0 7	—	—	—
	1 0	1 7.0 7	6.0 3	—	—	—
	1 1	—	6.0 2	—	—	—
	1 2	—	6.0 5	—	5.5 0	—
1 9 7 5	1	1 6.9 1	5.4 0	8.8 3	6.3 3	—
	2	1 7.5 7	5.4 2	8.9 5	6.0 6	—

DONNES D'OBSERVATION DE PIEZOMETRES (3)

An . M	IRE	6 1 6	1 2 1 8	1 2 0 2	1 2 0 4	1 1 2 6	
		(m)	(m)	(m)	(m)	(m)	
1 9 7 5	3	1 6.8 6	5.4 1	8.9 6	6.0 7	—	
	4	1 6.8 6	5.4 3	8.9 0	6.5 0	—	
	5	1 6.5 2	5.9 3	7.3 5	4.9 8	—	
	6	1 6.6 2	4.9 3	6.9 0	5.3 8	—	
	7	1 6.5 6	5.0 0	7.0 8	6.0 0	2 5.2 5	
	8	1 6.5 0	5.0 9	7.6 5	6.7 0	—	
	9	1 6.4 7	5.8 2	8.0 4	6.8 2	—	
	1 0	1 6.5 0	5.8 9	8.5 0	6.8 0	—	
	1 1	1 6.4 6	5.9 3	8.9 2	6.7 0	—	
	1 2	1 6.4 6	5.9 2	9.0 3	6.7 0	—	
	1 9 7 6	1	1 6.5 5	5.9 5	9.0 4	6.3 7	—
		2	1 6.4 1	5.9 6	9.0 0	6.0 5	2 5.5 1
3		1 6.4 0	5.9 6	8.6 5	6.2 8	—	
4		1 6.4 2	6.0 0	8.3 5	5.9 2	—	
5		1 6.3 8	6.0 0	7.8 6	6.1 7	—	
6		1 6.8 7	6.1 8	7.8 8	6.5 4	—	
7		1 6.6 3	6.1 0	8.4 1	6.9 9	2 5.6 4	
8		1 6.6 8	6.1 4	8.8 1	7.4 5	—	
9		1 6.7 7	6.1 9	9.2 2	7.2 6	—	
1 0		1 6.6 0	6.8 6	9.7 0	7.3 3	—	
1 1		1 6.6 4	6.2 7	1 0.0 1	7.3 5	—	
1 2		1 6.6 4	6.2 7	9.9 7	7.1 6	—	
1 9 7 7	1	1 6.6 7	6.2 7	9.0 4	6.5 2	—	
	2	1 6.9 2	6.2 7	8.5 5	6.1 9	2 5.4 1	
	3	1 7.0 7	6.3 0	8.2 3	6.1 5	—	
	4	1 7.0 2	6.3 2	8.4 5	6.1 6	—	
	5	1 7.2 9	6.5 7	9.1 4	6.5 2	—	
	6	1 7.1 5	6.3 5	9.4 8	6.7 3	2 5.9 8	
	7	1 7.0 0	6.3 8	9.8 4	7.0 2	—	
	8	1 7.0 7	—	1 0.4 0	8.4 0	—	
	9	1 7.2 7	6.5 8	1 0.6 6	7.4 9	—	
	1 0	1 7.3 2	6.5 0	1 0.9 7	7.1 7	—	
	1 1	1 7.2 4	6.1 5	1 1.1 5	6.0 1	—	
	1 2	1 7.2 5	6.0 7	1 0.9 3	6.3 5	—	
1 9 7 8	1	1 7.0 2	6.3 6	9.3 4	6.1 3	—	
	2	1 7.2 9	6.3 5	8.8 7	6.5 4	2 6.1 8	
	3	—	—	8.8 4	6.4 5	—	
	4	1 8.2 0	6.3 6	9.7 2	6.4 7	2 5.5 9	
	5	1 7.4 7	6.1 0	8.5 4	6.6 5	—	
	6	1 7.7 7	6.3 5	8.8 1	6.9 5	—	
	7	1 7.6 8	6.1 3	8.1 9	7.8 5	—	
	8	1 7.7 4	6.5 4	1 0.0 0	8.1 9	—	

DONNEES D'OBSERVATION DE PIEZOMETRES (4)

An . M		IRE	6 1 6	1 2 1 8	1 2 0 2	1 2 0 4	1 1 2 6
			(m)	(m)	(m)	(m)	(m)
1 9 7 8	9		1 7.7 5	6.3 0	1 0.1 4	8.4 8	—
	1 0		1 7.8 2	6.3 0	1 0.2 3	8.6 1	—
	1 1		1 8.0 5	6.2 9	1 0.8 7	7.9 9	—
	1 2		1 8.1 6	6.3 0	1 1.0 4	7.7 3	—
1 9 7 9	1		1 7.7 2	6.2 8	1 1.1 1	7.8 4	—
	2		—	—	—	—	—
	3		1 7.5 7	6.1 1	1 1.0 2	7.6 5	—
	4		1 7.9 0	6.2 0	9.9 6	7.3 6	—
	5		—	—	—	—	—
	6		1 8.2 5	6.3 4	1 0.1 7	8.9 8	—
	7		—	—	—	—	2 7.0 1
	8		1 8.6 5	6.5 6	1 0.3 5	9.1 4	—
	9		—	—	—	—	—
	1 0		1 8.3 5	6.6 7	1 1.4 3	1 0.0 3	—
1 9 8 0	1 1		—	—	—	—	—
	1 2		1 8.7 5	6.6 2	1 1.2 1	9.9 3	2 7.2 5
	1		—	—	—	—	—
	2		1 8.1 0	6.2 5	1 0.2 1	8.1 5	—
	3		1 7.7 3	5.9 9	9.4 6	7.2 7	2 6.8 8
	4		1 7.6 8	5.8 8	8.7 7	7.1 6	—
	5		1 8.1 0	5.9 0	8.7 2	8.2 6	—
	6		1 8.1 0	6.0 5	8.6 0	8.4 6	—
	7		—	—	—	—	2 6.8 6
	8		1 8.3 0	6.0 0	9.4 7	9.9 1	—
	9		—	—	—	—	—
	1 0		1 8.1 5	6.3 5	1 0.9 7	9.0 2	—
1 9 8 1	1 1		—	—	—	—	—
	1 2		1 8.1 3	6.5 6	1 1.3 1	8.8 7	—
	1		—	5.6 8	—	—	—
	2		1 7.6 8	5.5 2	9.5 7	6.7 2	—
	3		—	—	—	—	2 6.3 7
	4		1 7.6 0	5.3 3	9.5 5	6.5 5	—
	5		1 7.6 0	5.1 4	6.8 9	6.5 5	—
	6		1 7.8 2	5.6 8	7.2 0	7.4 7	—
	7		—	—	—	—	—
	8		1 7.6 0	5.4 0	8.1 0	7.4 0	2 6.5 9
	9		—	—	—	—	—
	1 0		1 7.7 0	5.5 2	9.3 0	8.7 8	—
1 9 8 2	1 1		—	—	—	—	—
	1 2		—	—	—	—	—
	1		—	6.8 5	—	—	—
	2		—	—	—	—	—

DONNEES D'OBSERVATION DE PIEZOMETRES (5)

An . M	IRE	6 1 6	1 2 1 8	1 2 0 2	1 2 0 4	1 1 2 6
1 9 8 2	3	1 8.0 0 (m)	6.3 4 (m)	1 0.2 5 (m)	8.4 0 (m)	2 6.8 7 (m)
	4	—	—	—	—	—
	5	1 8.1 0	6.4 0	1 1.0 7	8.0 4	—
	6	1 8.1 0	6.5 0	9.8 1	7.9 9	—
	7	1 8.2 5	5.9 8	1 0.1 1	8.6 5	2 7.4 7
	8	—	—	—	—	2 7.9 5
	9	—	—	—	—	2 6.3 7
	10	—	—	—	—	—
	11	—	—	—	—	—
	12	1 8.3 8	6.7 3	1 1.5 2	8.2 5	—
1 9 8 3	1	1 8.4 8	—	1 0.9 2	7.8 7	—
	2	1 8.5 2	7.1 7	1 0.1 6	7.4 7	3 0.6 9
	3	1 8.5 2	7.2 5	1 0.1 2	7.1 7	—
	4	1 8.6 5	7.3 5	1 0.4 0	7.3 5	3 1.6 3
	5	1 8.6 2	7.2 4	1 1.1 0	6.8 3	—
	6	1 8.7 0	7.2 7	1 1.5 4	8.3 3	—
	7	1 8.8 0	7.4 0	1 1.8 2	8.7 0	3 1.9 1
	8	1 8.8 5	—	1 1.8 2	8.8 0	—
	9	1 8.9 7	—	1 2.3 2	8.9 0	—
	10	1 9.0 0	—	1 2.4 7	8.7 5	—
	11	1 8.9 0	—	1 2.5 4	8.2 9	—
	12	1 8.8 9	—	1 2.5 7	8.1 4	—
1 9 8 4	1	1 8.8 6	7.6 0	1 2.6 2	7.9 0	—
	2	1 9.0 0	—	1 2.6 2	7.8 5	3 3.5 3
	3	1 9.0 0	—	1 2.4 2	7.3 5	—
	4	—	—	—	—	3 5.0 6
	5	—	—	—	—	—
	6	1 9.1 0	—	1 1.9 5	7.9 8	3 5.6 0
	7	1 9.2 5	—	1 2.0 7	9.1 0	—
	8	1 9.3 5	—	1 2.2 6	9.6 0	3 5.8 9
	9	1 9.4 0	—	1 2.4 2	9.5 5	3 5.0 6
	10	1 9.4 0	—	1 2.6 2	9.0 1	—
	11	1 9.4 0	—	1 2.6 6	8.9 8	—
	12	1 9.3 2	—	1 2.5 5	8.8 5	—
1 9 8 5	1	1 9.4 0	4.6 5	1 2.7 7	8.6 5	—
	2	1 9.6 2	4.7 1	1 2.7 5	8.4 9	—
	3	1 9.7 2	4.8 0	1 2.7 1	8.6 6	—
	4	1 9.8 0	5.1 7	1 2.6 8	8.9 4	—
	5	1 9.7 0	5.1 5	1 2.4 5	8.9 5	—
	6	1 9.9 0	5.3 5	1 2.6 0	9.6 0	—
	7	1 9.9 5	5.8 0	1 2.5 5	1 0.0 3	—
	8	1 9.8 0	5.8 0	1 2.6 0	1 0.3 0	—

DONNEES D'OBSERVATION DE PIEZOMETRES ET LES VALEURS
MOYENNES SEQUENTILLES (1)

I R E 2 6 6

O U J D A : S i d i B o u H o u r i a

Année Mois	①	②	③ ①-②	Année Mois	①	②	③ ①-②
1968, 9	(m) 30.00	(m) —	(m) —	12	(m) 31.86	(m) 32.89	(m) -1.03
10	29.47	—	—	1972, 1	32.68	32.96	-0.28
11	28.94	—	—	2	32.36	33.00	-0.64
12	28.41	—	—	3	32.46	33.03	-0.57
1969, 1	27.88	—	—	4	32.35	33.06	-0.71
2	27.91	—	—	5	32.70	33.10	-0.40
3	27.95	28.69	-0.74	6	33.15	33.21	-0.06
4	27.82	28.80	-0.98	7	33.42	33.36	0.06
5	27.57	28.94	-1.37	8	33.96	33.46	0.50
6	28.55	29.09	-0.54	9	34.13	33.55	0.58
7	28.98	29.24	-0.26	10	34.30	33.63	0.67
8	30.22	29.38	0.84	11	34.00	33.69	0.31
9	31.21	29.52	1.69	12	34.20	33.71	0.49
10	30.93	29.65	1.28	1973, 1	33.88	33.72	0.16
11	30.67	29.79	0.88	2	33.60	33.72	-0.12
12	30.28	29.94	0.34	3	33.40	33.71	-0.31
1970, 1	29.60	30.08	-0.48	4	33.34	33.68	-0.34
2	29.75	30.23	-0.48	5	33.05	33.65	-0.60
3	29.45	30.35	-0.90	6	33.30	33.61	-0.31
4	29.30	30.45	-1.15	7	33.55	33.56	-0.01
5	29.56	30.54	-0.98	8	33.92	33.52	0.40
6	30.09	30.67	-0.58	9	33.92	33.43	0.49
7	30.80	30.82	-0.02	10	33.80	33.24	0.56
8	31.98	30.99	0.99	11	33.70	33.02	0.68
9	32.45	31.16	1.29	12	33.60	32.79	0.81
10	31.90	31.43	0.47	1974, 1	33.31	32.50	0.81
11	32.06	31.72	0.34	2	33.20	32.17	1.03
12	31.81	31.92	-0.11	3	31.47	31.83	-0.36
1971, 1	31.80	32.09	-0.29	4	30.67	31.51	-0.84
2	31.63	32.24	-0.61	5	30.60	31.15	-0.55
3	31.66	32.36	-0.70	6	30.08	30.77	-0.69
4	33.64	32.50	1.14	7	29.90	30.40	-0.50
5	32.16	32.64	-0.48	8	29.60	30.02	-0.42
6	32.13	32.71	-0.58	9	30.23	29.72	0.51
7	32.92	32.75	0.17	10	29.70	29.51	0.19
8	33.53	32.82	0.71	11	29.26	29.36	-0.10
9	33.77	32.88	0.89	12	28.95	29.24	-0.29
10	33.81	32.86	0.95	1975, 1	28.86	29.20	-0.34
11	33.64	32.83	0.81	2	28.73	29.20	-0.47

Note: 1 --- Données d'observation de piézomètres (à suivre)

2 --- La soustraction des valeurs moyennes en 12 mois

IRE 266

(suite)

Année		①	②	③	Année		①	②	③
Mois				①-②	Mois				①-②
		(m)	(m)	(m)			(m)	(m)	(m)
1975,	3	28.58	29.23	-0.65		6	34.70	34.48	0.22
	4	28.70	29.25	-0.55		7	35.03	34.75	0.28
	5	28.78	29.28	-0.50		8	35.97	35.02	0.95
	6	29.21	29.31	-0.10		9	36.14	35.26	0.88
	7	29.60	29.34	0.26		10	36.20	35.44	0.76
	8	30.10	29.38	0.72		11	35.90	35.61	0.29
	9	30.35	29.41	0.94		12	35.70	35.75	-0.05
	10	30.02	29.45	0.57	1979,	1	35.82	35.86	-0.04
	11	29.65	29.49	0.16		2	35.81	35.93	-0.12
	12	29.34	29.53	-0.19		3	35.80	35.97	-0.17
1976,	1	29.25	29.59	-0.34		4	35.52	36.01	-0.49
	2	29.14	29.67	-0.53		5	35.77	36.05	-0.28
	3	29.06	29.74	-0.68		6	36.02	36.10	-0.08
	4	29.12	29.81	-0.69		7	36.27	36.09	0.18
	5	29.25	29.89	-0.64		8	36.52	35.98	0.54
	6	29.74	29.99	-0.25		9	36.56	35.81	0.75
	7	30.53	30.10	0.43		10	36.60	35.65	0.95
	8	31.02	30.21	0.81		11	36.45	35.50	0.95
	9	31.12	30.32	0.80		12	36.30	35.35	0.95
	10	30.95	30.45	0.50	1980,	1	35.08	35.20	-0.12
	11	30.70	30.60	0.10		2	33.85	35.02	-1.17
	12	30.65	30.77	-0.12		3	33.79	34.82	-1.03
1977,	1	30.58	30.89	-0.31		4	33.72	34.62	-0.90
	2	30.45	31.02	-0.57		5	33.90	34.42	-0.52
	3	30.50	31.19	-0.69		6	34.30	34.24	0.06
	4	30.75	31.36	-0.61		7	34.28	34.09	0.19
	5	31.27	31.54	-0.27		8	34.25	34.00	0.25
	6	31.60	31.70	-0.10		9	34.18	33.93	0.25
	7	31.65	31.86	-0.21		10	34.10	33.85	0.25
	8	32.98	32.03	0.95		11	34.16	33.70	0.46
	9	33.20	32.24	0.96		12	34.22	33.46	0.76
	10	33.10	32.47	0.63	1981,	1	33.66	33.22	0.44
	11	32.75	32.69	0.06		2	33.10	32.97	0.13
	12	32.57	32.92	-0.35		3	32.81	32.72	0.09
1978,	1	32.43	33.19	-0.76		4	32.79	32.47	0.32
	2	32.75	33.46	-0.71		5	31.10	32.22	-1.12
	3	33.15	33.70	-0.55		6	31.48	31.97	-0.49
	4	33.67	33.96	-0.29		7	31.35	31.73	-0.38
	5	33.66	34.22	-0.56		8	31.22	31.53	-0.31

.../...

IRE 266

Année Mois	①	②	③ ①-②	Année Mois	①	②	③ ①-②
1981, 9	(m) 31.18	(m) 31.38	(m) -0.20	12	(m) 39.95	(m) 40.22	(m) -0.27
10	31.14	31.24	-0.10	1985, 1	41.05	40.53	0.52
11	31.12	31.15	-0.03	2	39.78	40.81	-1.03
12	31.10	31.18	-0.08	3	39.95	—	—
1982, 1	30.99	31.12	-0.13	4	41.75	—	—
2	31.10	31.03	0.07	5	41.95	—	—
3	31.21	31.04	0.17	6	42.15	—	—
4	30.96	31.00	-0.04	7	42.45	—	—
5	30.71	30.92	-0.20	8	42.85	—	—
6	32.60	30.78	1.82				
7	28.85	30.60	-1.75				
8	31.60	30.43	1.17				
9	31.00	30.29	0.71				
10	30.40	30.18	0.22				
11	29.80	30.18	-0.38				
12	29.20	30.39	-1.19				
1983, 1	28.60	30.87	-2.27				
2	29.40	31.44	-2.04				
3	29.60	31.94	-2.34				
4	29.80	32.50	-2.70				
5	31.97	33.10	-1.13				
6	36.30	33.76	2.54				
7	36.70	34.46	2.24				
8	37.30	35.17	2.13				
9	37.40	35.93	1.47				
10	37.38	36.72	0.66				
11	37.36	37.39	-0.03				
12	37.36	37.75	-0.39				
1984, 1	37.36	37.94	-0.58				
2	37.70	38.12	-0.42				
3	39.40	38.31	1.09				
4	39.05	38.52	0.53				
5	38.71	38.73	-0.02				
6	38.36	38.94	-0.58				
7	39.00	39.20	-0.20				
8	39.50	39.44	0.06				
9	39.75	39.55	0.20				
10	39.95	39.68	0.27				
11	39.80	39.93	-0.13				

DONNEES D'OBSERVATION DE PIEZOMETRE ET

LES VALEURS MOYENS SEQUENTILLES (1)-(3) OIJDA : Angad
IRE 790

Année		①	②	③	Année		①	②	③
Mois				①-②	Mois				①-②
		(m)	(m)	(m)			(m)	(m)	(m)
1968,	9	28.58	—	—		12	27.60	27.88	-0.28
	10	28.33	—	—	1972,	1	27.89	27.88	0.01
	11	28.08	—	—		2	27.97	27.88	0.09
	12	27.83	—	—		3	28.12	27.89	0.23
1969,	1	27.58	—	—		4	28.15	27.89	0.26
	2	27.64	—	—		5	28.20	27.91	0.29
	3	27.70	27.68	0.02		6	28.15	27.96	0.19
	4	27.24	27.59	-0.35		7	27.65	28.01	-0.36
	5	27.39	27.52	-0.13		8	27.65	28.06	-0.41
	6	27.54	27.49	0.05		9	27.70	28.11	-0.41
	7	27.46	27.47	-0.01		10	27.78	28.17	-0.39
	8	27.37	27.46	-0.09		11	28.28	28.23	0.05
	9	27.34	27.45	-0.11		12	28.45	28.28	0.17
	10	27.42	27.45	-0.03	1973,	1	28.25	28.36	-0.11
	11	27.48	27.45	0.03		2	28.62	28.45	0.17
	12	27.50	27.43	0.07		3	28.70	28.54	0.16
1970,	1	27.52	27.40	0.12		4	29.00	28.63	0.37
	2	27.57	27.37	0.20		5	28.84	28.70	0.14
	3	27.48	27.35	0.13		6	28.82	28.73	0.09
	4	27.38	27.32	0.06		7	28.70	28.76	-0.06
	5	27.30	27.30	0.00		8	28.77	28.79	-0.02
	6	27.15	27.30	-0.15		9	28.83	28.80	0.03
	7	27.10	27.31	-0.21		10	28.90	28.79	0.11
	8	27.08	27.32	-0.24		11	28.80	28.78	0.02
	9	27.16	27.34	-0.18		12	28.70	28.78	-0.08
	10	26.91	27.36	-0.45	1974,	1	28.70	28.79	-0.09
	11	27.45	27.39	0.06		2	28.75	28.80	-0.05
	12	27.55	27.44	0.11		3	28.80	28.74	0.06
1971,	1	27.65	27.50	0.15		4	28.79	28.63	0.16
	2	27.74	27.55	0.19		5	28.85	28.50	0.35
	3	27.71	27.59	0.12		6	28.80	28.36	0.44
	4	27.66	27.65	0.01		7	28.84	28.24	0.60
	5	27.74	27.70	0.04		8	28.82	28.12	0.70
	6	27.85	27.71	0.14		9	27.46	28.00	-0.54
	7	27.92	27.73	0.19		10	27.54	27.87	-0.33
	8	27.45	27.74	-0.29		11	27.09	27.74	-0.65
	9	27.65	27.77	-0.12		12	27.09	27.60	-0.51
	10	27.85	27.81	0.04	1975,	1	27.31	27.44	-0.13
	11	27.76	27.85	-0.09		2	27.34	27.26	0.08

.../...

IRE 790

Année		①	②	③	Année		①	②	③
Mois				②-③	Mois				①-②
		(m)	(m)	(m)			(m)	(m)	(m)
1975,	3	27.28	27.13	0.15		6	28.23	28.28	-0.05
	4	27.30	27.04	0.26		7	28.32	28.36	-0.04
	5	27.19	26.95	0.24		8	28.30	28.44	-0.14
	6	27.11	26.89	0.22		9	28.53	28.50	0.03
	7	26.63	26.80	-0.17		10	28.56	28.57	-0.01
	8	26.70	26.70	0.00		11	28.70	28.66	0.04
	9	26.54	26.61	-0.07		12	28.83	28.76	0.07
	10	26.27	26.53	-0.26	1979,	1	28.89	28.87	0.02
	11	26.27	26.46	-0.19		2	28.85	28.99	-0.14
	12	26.28	26.40	-0.12		3	28.81	29.10	-0.29
1976,	1	26.10	26.37	-0.27		4	29.13	29.23	-0.10
	2	26.17	26.35	-0.18		5	29.34	29.35	-0.01
	3	26.25	26.33	-0.08		6	29.54	29.42	0.12
	4	26.47	26.34	0.13		7	29.63	29.48	0.15
	5	26.35	26.38	-0.03		8	29.72	29.57	0.15
	6	26.46	26.42	0.04		9	29.98	29.66	0.32
	7	26.52	26.49	0.03		10	30.23	29.73	0.50
	8	26.37	26.57	-0.20		11	29.81	29.82	-0.01
	9	26.43	26.65	-0.22		12	29.38	29.88	-0.50
	10	26.64	26.72	-0.08	1980,	1	29.76	29.92	-0.16
	11	26.77	26.81	-0.04		2	30.13	29.95	0.18
	12	26.82	26.90	-0.08		3	29.71	29.96	-0.25
1977,	1	27.08	26.98	0.10		4	30.01	29.95	0.06
	2	27.12	27.07	0.05		5	30.43	29.95	0.48
	3	27.25	27.17	0.08		6	30.03	30.00	0.03
	4	27.28	27.27	0.01		7	30.03	30.05	-0.02
	5	27.60	27.37	0.23		8	30.03	30.08	-0.05
	6	27.46	27.47	-0.01		9	30.00	30.10	-0.10
	7	27.45	27.56	-0.11		10	29.98	30.13	-0.15
	8	27.57	27.63	-0.06		11	30.09	30.13	-0.04
	9	27.64	27.70	-0.06		12	30.19	30.14	0.05
	10	27.85	27.77	0.08	1981,	1	30.22	30.16	0.06
	11	27.92	27.83	0.09		2	30.25	30.18	0.07
	12	28.03	27.89	0.14		3	30.19	30.19	0.00
1978,	1	27.90	27.96	-0.06		4	30.13	30.20	-0.07
	2	28.00	28.02	-0.02		5	30.35	30.21	0.14
	3	28.08	28.09	-0.01		6	30.31	30.21	0.10
	4	28.15	28.16	-0.01		7	30.28	30.22	0.06
	5	28.21	28.22	-0.01		8	30.23	30.22	0.01

.../...

IRE 790

Année		①	②	③	Année		①	②	③
Mois				①-②	Mois				①-②
1981,	9	(m) 30.16	(m) 30.24	(m) -0.08		12	(m) 33.03	(m) 33.06	(m) -0.03
	10	30.08	30.27	-0.19	1985,	1	33.08	33.11	-0.03
	11	30.15	30.30	-0.15		2	33.08	33.16	-0.08
	12	30.22	30.33	-0.11		3	33.18	-	-
1982,	1	30.29	30.37	-0.08		4	33.49	-	-
	2	30.36	30.43	-0.07		5	33.35	-	-
	3	30.43	30.49	-0.06		6	33.45	-	-
	4	30.54	30.56	-0.02		7	33.45	-	-
	5	30.65	30.63	0.02		8	33.45	-	-
	6	30.73	30.70	0.03					
	7	30.93	30.78	0.15					
	8	30.94	30.89	0.05					
	9	30.95	31.00	-0.05					
	10	30.96	31.11	-0.15					
	11	30.97	31.22	-0.25					
	12	30.98	31.32	-0.34					
1983,	1	31.53	31.40	0.13					
	2	31.78	31.48	0.30					
	3	31.71	31.57	0.14					
	4	31.78	31.65	0.13					
	5	32.03	31.74	0.29					
	6	31.78	31.84	-0.06					
	7	31.91	31.92	-0.01					
	8	31.93	31.97	-0.04					
	9	31.97	32.03	-0.06					
	10	31.99	32.08	-0.09					
	11	32.11	32.13	-0.02					
	12	32.16	32.20	-0.04					
1984,	1	32.21	32.28	-0.07					
	2	32.43	32.26	0.07					
	3	32.33	32.44	-0.11					
	4	32.47	32.51	-0.04					
	5	32.61	32.58	0.03					
	6	32.75	32.65	0.10					
	7	32.83	32.72	0.11					
	8	32.93	32.78	0.15					
	9	32.93	32.84	0.09					
	10	32.73	32.92	-0.19					
	11	32.93	32.99	-0.06					

DONNEES D'OBSERVATION DE PIEZOMETRE ET
LES VALEURS MOYENS SEQUENTILLES (1)-(3).

ANNEXE 3.23
(1) - (3)

IRE 1208

Oulad-Arija
OUJDA Oulad-Hamel

Année		①	②	③	Année		①	②	③
Mois				①-②	Mois				①-②
		(m)	(m)	(m)			(m)	(m)	(m)
1968,	9	1 1.5 3	—	—		12	1 3.0 0	1 2.5 7	0.4 3
	10	1 1.4 9	—	—	1972,	1	1 2.4 7	1 2.5 9	-0.1 2
	11	1 1.4 6	—	—		2	1 2.1 4	1 2.6 1	-0.4 7
	12	1 1.4 2	—	—		3	1 2.3 2	1 2.6 2	-0.3 0
1969,	1	1 1.3 8	—	—		4	1 2.0 5	1 2.6 3	-0.5 8
	2	1 1.3 4	—	—		5	1 2.2 5	1 2.6 3	-0.3 8
	3	1 1.2 9	1 1.6 2	-0.3 3		6	1 2.4 7	1 2.6 3	-0.1 6
	4	1 1.4 7	1 1.6 9	-0.2 2		7	1 2.5 9	1 2.6 6	-0.0 7
	5	1 1.6 6	1 1.7 6	-0.1 0		8	1 2.8 0	1 2.7 1	0.0 9
	6	1 1.8 4	1 1.7 7	0.0 7		9	1 3.1 0	1 2.7 4	0.3 6
	7	1 1.9 9	1 1.7 6	0.2 3		10	1 3.2 2	1 2.7 5	0.4 7
	8	1 2.1 4	1 1.7 5	0.3 9		11	1 3.1 0	1 2.7 3	0.3 7
	9	1 2.3 6	1 1.7 6	0.6 0		12	1 3.1 4	1 2.7 1	0.4 3
	10	1 2.4 8	1 1.7 8	0.7 0	1973,	1	1 2.9 5	1 2.6 9	0.2 6
	11	1 1.9 5	1 1.8 0	0.1 5		2	1 2.8 0	1 2.6 8	0.1 2
	12	1 1.3 3	1 1.8 3	-0.5 0		3	1 2.6 1	1 2.6 7	-0.0 6
1970,	1	1 1.1 9	1 1.8 5	-0.6 6		4	1 1.9 8	1 2.6 7	-0.6 9
	2	1 1.2 7	1 1.8 8	-0.6 1		5	1 1.8 6	1 2.6 8	-0.8 2
	3	1 1.5 7	1 1.9 2	-0.3 5		6	1 2.2 4	1 2.7 0	-0.4 6
	4	1 1.7 2	1 1.9 5	-0.2 3		7	1 2.4 2	1 2.6 9	-0.2 7
	5	1 1.9 6	1 2.0 0	-0.0 4		8	1 2.6 4	1 2.6 6	-0.0 2
	6	1 2.1 1	1 2.1 2	-0.0 1		9	1 2.9 8	1 2.6 1	0.3 7
	7	1 2.3 2	1 2.2 6	0.0 6		10	1 3.3 5	1 2.5 1	0.8 4
	8	1 2.5 5	1 2.4 0	0.1 5		11	1 3.3 5	1 2.3 8	0.9 7
	9	1 2.7 5	1 2.5 0	0.2 5		12	1 3.3 0	1 2.2 5	1.0 5
	10	1 2.8 2	1 2.6 0	0.2 2	1974,	1	1 2.5 3	1 2.1 4	0.3 9
	11	1 2.9 6	1 2.6 8	0.2 8		2	1 2.5 0	1 2.0 7	0.4 3
	12	1 3.0 0	1 2.7 2	0.2 8		3	1 1.7 7	1 2.0 0	-0.2 3
1971,	1	1 3.0 0	1 2.7 2	0.2 8		4	1 0.4 3	1 1.9 3	-1.5 0
	2	1 2.7 0	1 2.7 2	-0.0 2		5	1 0.3 2	1 1.8 3	-1.5 1
	3	1 2.7 4	1 2.7 3	0.0 1		6	1 0.5 5	1 1.7 1	-1.1 6
	4	1 2.8 6	1 2.7 5	0.1 1		7	1 1.5 2	1 1.5 9	-0.0 7
	5	1 2.8 1	1 2.7 8	0.0 3		8	1 1.8 0	1 1.4 8	0.3 2
	6	1 2.0 6	1 2.7 9	-0.7 3		9	1 2.1 9	1 1.3 8	0.8 1
	7	1 2.3 9	1 2.7 7	-0.3 8		10	1 2.3 5	1 1.3 7	0.9 8
	8	1 2.6 3	1 2.7 2	-0.0 9		11	1 1.9 7	1 1.3 4	0.6 3
	9	1 2.8 9	1 2.6 8	0.2 1		12	1 1.8 6	1 1.2 4	0.6 2
	10	1 3.1 4	1 2.6 3	0.5 1	1975,	1	1 1.1 2	1 1.1 4	-0.0 2
	11	1 3.2 4	1 2.5 7	0.6 7		2	1 1.1 5	1 1.0 5	0.1 0

.../...

Année		①	②	③	Année		①	②	③		
Mois				①-②	Mois				①-②		
		(m)	(m)	(m)			(m)	(m)	(m)		
1975,	3	10.89	11.02	-0.13		6	12.93	13.13	-0.20		
	4	11.12	11.01	0.11		7	13.40	13.23	0.17		
	5	8.87	11.07	-2.20		8	13.70	13.31	0.39		
	6	9.43	11.15	-1.72		9	13.85	13.38	0.47		
	7	10.25	11.20	-0.95		10	13.85	13.42	0.43		
	8	11.05	11.27	-0.22		11	13.70	13.46	0.24		
	9	12.13	11.33	0.80		12	13.54	13.52	0.02		
	10	12.30	11.39	0.91		1979,	1	13.49	13.58	-0.09	
	11	13.37	11.53	1.84			2	13.39	13.61	-0.22	
	12	12.27	11.74	0.53			3	13.28	13.64	-0.36	
	1976,	1	12.10	11.92			0.18	4	13.18	13.68	-0.50
		2	11.80	12.07			-0.27	5	13.49	13.74	-0.25
3		11.63	12.16	-0.53	6		13.80	13.81	-0.01		
4		11.84	12.20	-0.36	7		13.91	13.86	0.05		
5		11.58	12.20	-0.62	8		14.02	13.85	0.17		
6		11.62	12.20	-0.58	9		14.23	13.80	0.43		
7		12.36	12.19	0.17	10		14.43	13.73	0.70		
8		12.62	12.17	0.45	11		14.49	13.67	0.82		
9		12.70	12.16	0.54	12		14.55	13.61	0.95		
10		12.79	12.18	0.61	1980,	1	13.72	13.53	0.19		
11		12.90	12.27	0.63		2	12.88	13.53	-0.65		
12		12.55	12.37	0.18		3	12.47	13.59	-1.12		
1977,	1	11.69	12.45	-0.76		4	12.33	13.60	-1.27		
	2	11.79	12.50	-0.71		5	12.84	13.58	-0.74		
	3	11.39	12.55	-1.16		6	12.98	13.54	-0.56		
	4	12.57	12.61	-0.04		7	12.97	13.48	-0.51		
	5	12.88	12.63	0.25		8	14.95	13.39	1.56		
	6	12.81	12.61	0.20		9	14.65	13.31	1.34		
	7	13.01	12.63	0.38		10	14.35	13.24	1.11		
	8	13.23	12.68	0.55		11	14.14	13.19	0.95		
	9	13.37	12.77	0.60		12	13.92	13.16	0.76		
	10	13.35	12.83	0.52	1981,	1	12.81	13.16	-0.35		
	11	12.84	12.84	0.00		2	11.70	13.10	-1.40		
	12	12.32	12.84	-0.52		3	11.64	12.99	-1.35		
1978,	1	12.27	12.87	-0.60		4	11.57	12.92	-1.35		
	2	12.51	12.90	-0.39		5	12.33	12.88	-0.55		
	3	12.67	12.94	-0.27		6	12.88	12.86	0.02		
	4	12.83	12.98	-0.15		7	13.09	12.90	0.19		
	5	12.86	13.04	-0.18		8	13.30	13.04	0.27		

.../...

IRE 1208

Année		①	②	③	Année		①	②	③
Mois				①-②	Mois				①-②
1981,	9	(m) 13.55	(m) 13.22	(m) 0.33		12	(m) 13.69	(m) 14.03	(m) -0.34
	10	13.80	13.41	0.39	1985,	1	12.95	14.14	-1.19
	11	13.81	13.58	0.23		2	13.53	14.23	-0.70
	12	13.83	13.67	0.16		3	13.91	—	—
1982,	1	13.84	13.73	0.11		4	14.35	—	—
	2	13.86	13.80	0.06		5	13.77	—	—
	3	13.87	13.82	0.05		6	14.55	—	—
	4	13.93	13.81	0.12		7	15.13	—	—
	5	14.00	13.76	0.24		8	15.60	—	—
	6	13.40	13.68	-0.28					
	7	14.10	13.60	0.50					
	8	13.85	13.52	0.33					
	9	13.60	13.43	0.17					
	10	13.34	13.37	-0.03					
	11	13.09	13.34	-0.25					
	12	12.84	13.36	-0.52					
1983,	1	12.90	13.41	-0.51					
	2	12.80	13.46	-0.66					
	3	12.70	13.56	-0.86					
	4	13.70	13.67	0.03					
	5	13.62	13.75	-0.13					
	6	14.13	13.80	0.33					
	7	14.55	13.83	0.72					
	8	14.75	13.85	0.90					
	9	14.95	13.91	1.04					
	10	14.65	13.93	0.72					
	11	13.72	13.89	-0.17					
	12	13.42	13.82	-0.40					
1984,	1	12.93	13.75	-0.82					
	2	13.30	13.72	-0.42					
	3	13.60	13.71	-0.11					
	4	13.36	13.73	-0.37					
	5	13.13	13.75	-0.62					
	6	12.89	13.77	-0.88					
	7	14.00	13.78	0.22					
	8	14.60	13.79	0.81					
	9	15.00	13.81	1.19					
	10	14.90	13.86	1.04					
	11	13.92	13.93	-0.01					

DONNEES D'OBSERVATION DE PIEZOMETRE ET
LES VALEURS MOYENNES SEQUENTILLES (1)-(3)

IRE 46

Ain Beni Mathar

Année	①	②	③	Année	①	②	③
Mois			①-②	Mois			①-②
	(m)	(m)	(m)		(m)	(m)	(m)
1968, 9	—	—	—	12	9.57	9.45	0.12
10	—	—	—	1972, 1	9.51	9.47	0.04
11	—	—	—	2	9.54	9.51	0.03
12	—	—	—	3	9.66	9.56	0.10
1969, 1	—	—	—	4	9.42	9.60	-0.18
2	—	—	—	5	9.22	9.63	-0.41
3	—	—	—	6	9.11	9.66	-0.55
4	—	—	—	7	9.62	9.70	-0.08
5	—	—	—	8	10.00	9.75	0.25
6	—	—	—	9	9.90	9.78	0.12
7	—	—	—	10	10.15	9.83	0.32
8	—	—	—	11	9.93	9.89	0.04
9	8.99	—	—	12	10.10	9.97	0.13
10	8.97	—	—	1973, 1	10.08	10.03	0.05
11	8.94	—	—	2	9.97	10.06	-0.09
12	8.91	—	—	3	10.14	10.06	0.08
1970, 1	8.80	—	—	4	10.02	10.06	-0.04
2	8.82	—	—	5	10.15	10.07	0.08
3	8.82	8.92	-0.10	6	10.08	10.07	0.01
4	8.82	8.92	-0.10	7	10.17	10.07	0.10
5	8.81	8.93	-0.12	8	9.94	10.08	-0.14
6	9.21	8.93	0.28	9	10.04	10.09	-0.05
7	9.04	8.94	0.10	10	10.09	10.09	0.00
8	8.96	8.95	0.01	11	10.09	10.09	0.00
9	8.97	8.97	0.00	12	10.09	10.09	0.00
10	8.98	9.01	-0.03	1974, 1	10.04	10.09	-0.05
11	8.99	9.05	-0.06	2	10.17	10.11	0.06
12	9.02	9.05	-0.03	3	10.17	10.12	0.05
1971, 1	8.91	9.05	-0.14	4	10.08	10.14	-0.06
2	8.99	9.07	-0.08	5	10.07	10.15	-0.08
3	9.02	9.11	-0.09	6	10.10	10.17	-0.07
4	9.55	9.16	0.39	7	10.22	10.18	0.04
5	9.02	9.22	-0.20	8	10.27	10.19	0.08
6	9.04	9.27	-0.23	9	10.16	10.20	-0.04
7	9.14	9.32	-0.18	10	10.28	10.22	0.06
8	9.56	9.36	0.20	11	10.29	10.22	0.07
9	9.27	9.41	-0.14	12	10.25	10.23	0.02
10	9.76	9.44	0.32	1975, 1	10.19	10.23	-0.04
11	9.67	9.44	0.23	2	10.28	10.24	0.04

.../...

Année		①	②	③	Année		①	②	③
Mois				①-②	Mois				①-②
		(m)	(m)	(m)			(m)	(m)	(m)
1975,	3	10.36	10.25	0.11		6	10.48	10.42	0.06
	4	10.21	10.26	-0.05		7	10.47	10.42	0.05
	5	10.09	10.27	-0.18		8	10.48	10.42	0.06
	6	10.17	10.27	-0.10		9	10.51	10.41	0.10
	7	10.24	10.28	-0.04		10	10.39	10.40	-0.01
	8	10.42	10.29	0.13		11	10.40	10.39	0.01
	9	10.32	10.30	0.02		12	10.36	10.39	-0.03
	10	10.39	10.31	0.08	1979,	1	10.34	10.39	-0.05
	11	10.32	10.33	-0.01		2	10.32	10.39	-0.07
	12	10.24	10.34	-0.10		3	10.27	10.39	-0.12
1976,	1	10.37	10.35	0.02		4	10.27	10.38	-0.11
	2	10.36	10.34	0.02		5	10.38	10.37	0.01
	3	10.48	10.33	0.15		6	10.48	10.37	0.11
	4	10.40	10.32	0.08		7	10.48	10.37	0.11
	5	10.34	10.30	0.04		8	10.48	10.37	0.11
	6	10.31	10.29	0.02		9	10.40	10.38	0.02
	7	10.26	10.28	-0.02		10	10.35	10.38	-0.03
	8	10.20	10.26	-0.06		11	10.32	10.37	-0.05
	9	10.25	10.25	0.00		12	10.29	10.35	-0.06
	10	10.19	10.24	-0.05	1980,	1	10.37	10.33	0.04
	11	10.13	10.23	-0.10		2	10.47	10.31	0.16
	12	10.14	10.22	-0.08		3	10.35	10.31	0.04
1977,	1	10.15	10.21	-0.06		4	10.22	10.33	-0.11
	2	10.23	10.21	0.02		5	10.16	10.35	-0.19
	3	10.30	10.22	0.08		6	10.13	10.37	-0.24
	4	10.25	10.23	0.02		7	10.26	10.38	-0.12
	5	10.31	10.24	0.07		8	10.39	10.39	0.00
	6	10.20	10.25	-0.05		9	10.48	10.40	0.08
	7	10.14	10.27	-0.13		10	10.58	10.42	0.16
	8	10.29	10.28	0.01		11	10.59	10.46	0.13
	9	10.32	10.29	0.03		12	10.54	10.50	0.04
	10	10.32	10.31	0.01	1981,	1	10.48	10.53	-0.05
	11	10.32	10.32	0.00		2	10.53	10.56	-0.03
	12	10.31	10.33	-0.02		3	10.58	10.58	0.00
1978,	1	10.35	10.36	-0.01		4	10.53	10.60	-0.07
	2	10.37	10.38	-0.01		5	10.58	10.60	-0.02
	3	10.41	10.40	0.01		6	10.67	10.61	0.06
	4	10.40	10.41	-0.01		7	10.67	10.63	0.04
	5	10.44	10.41	0.03		8	10.68	10.64	0.04

.../...

IRE 46

Année Mois	①	②	③ ①-②	Année Mois	①	②	③ ①-②
1981, 9	(m) 10.68	(m) 10.66	(m) 0.02	12	(m) 11.43	(m) 11.35	(m) 0.08
10	10.68	10.67	0.01	1985, 1	11.58	11.33	0.25
11	10.68	10.68	0.00	2	11.42	11.31	0.11
12	10.68	10.68	0.00	3	11.29	—	—
1982, 1	10.69	10.69	0.00	4	10.99	—	—
2	10.69	10.70	-0.01	5	11.02	—	—
3	10.69	10.71	-0.02	6	10.96	—	—
4	10.69	10.72	-0.03	7	11.25	—	—
5	10.69	10.73	-0.04	8	11.22	—	—
6	10.72	10.75	-0.03				
7	10.75	10.77	-0.02				
8	10.78	10.79	-0.01				
9	10.81	10.81	0.00				
10	10.84	10.83	0.01				
11	10.87	10.85	0.02				
12	10.90	10.88	0.02				
1983, 1	10.93	10.92	0.01				
2	10.93	10.96	-0.03				
3	10.93	11.00	-0.07				
4	10.90	11.05	-0.15				
5	10.96	11.10	-0.14				
6	11.13	11.15	-0.02				
7	11.28	11.18	0.10				
8	11.31	11.21	0.10				
9	11.30	11.24	0.06				
10	11.43	11.27	0.16				
11	11.56	11.30	0.26				
12	11.27	11.33	-0.06				
1984, 1	11.33	11.34	-0.01				
2	11.27	11.35	-0.08				
3	11.27	11.36	-0.09				
4	11.30	11.38	-0.08				
5	11.33	11.37	-0.04				
6	11.37	11.37	0.00				
7	11.36	11.39	-0.03				
8	11.47	11.41	0.06				
9	11.52	11.42	0.10				
10	11.48	11.40	0.08				
11	11.44	11.38	0.06				

```

*****
***** Station No. 1
*****
***** Data List
*****
***** SIMULATION MODEL No. 1
*****

```

No.	AB/2(m)	MN/2(m)	V(mV)	I(mA)	G.C.	A.R.(ohm-m)	Layer No.	R (ohm-m)	Thickness(m)
(1)	4.5	0.6	2.34E+02	200	5.21E+01	61	1	75.0	4.9
(2)	6.0	0.6	1.36E+02	200	9.33E+01	63	2	7.8	35.1
(3)	8.0	0.6	6.35E+01	200	1.67E+02	53	3	14.0	230.0
(4)	10.0	0.6	3.26E+01	200	2.61E+02	43	4	2.2	230.0
(5)	14.0	0.6	2.44E+01	500	5.12E+02	25	5	48.0	INFINITE
(6)	14.0	3.0	1.18E+02	500	9.79E+01	23			
(7)	20.0	0.6	6.93E+00	500	1.05E+03	15			
(8)	20.0	3.0	3.19E+01	500	2.05E+02	13			
(9)	27.0	3.0	1.20E+01	500	3.77E+02	9			
(10)	35.0	3.0	6.91E+00	500	6.37E+02	9			
(11)	45.0	3.0	4.39E+00	500	1.06E+03	9			
(12)	60.0	3.0	2.50E+00	500	1.88E+03	9			
(13)	80.0	3.0	1.44E+00	500	3.35E+03	10			
(14)	80.0	15.0	7.58E+00	500	6.47E+02	10			
(15)	100.0	3.0	9.78E-01	500	5.23E+03	10			
(16)	100.0	15.0	4.90E+00	500	1.02E+03	10			
(17)	140.0	15.0	2.67E+00	500	2.03E+03	11			
(18)	200.0	15.0	1.34E+00	500	4.17E+03	11			
(19)	270.0	15.0	1.11E+00	700	7.61E+03	12			
(20)	270.0	50.0	3.87E+00	700	2.21E+03	12			
(21)	350.0	15.0	7.91E-01	800	1.28E+04	13			
(22)	350.0	50.0	2.32E+00	800	3.77E+03	11			
(23)	450.0	50.0	1.30E+00	800	6.28E+03	10			
(24)	600.0	50.0	6.27E-01	800	1.12E+04	9			
(25)	800.0	50.0	3.08E-01	800	2.00E+04	B			
(26)	1000.0	50.0	1.99E-01	800	3.13E+04	B			
(27)	1250.0	50.0	1.49E-01	800	4.90E+04	9			
(28)	1500.0	50.0	1.10E-01	800	7.06E+04	10			

```

*****
***** Calculated Values MODEL No. 1
*****
< No. > < AB/2(m) > < A.R.(ohm-m) >
1 4.5 67.0
2 6.0 59.7
3 8.0 48.4
4 10.7 34.8
5 14.2 22.2
6 19.0 13.8
7 25.3 10.0
8 33.7 8.9
9 45.0 8.8
10 60.0 9.2
11 80.0 9.8
12 106.7 10.6
13 142.3 11.3
14 189.8 11.7
15 253.1 11.7
16 337.5 11.2
17 450.0 10.1
18 600.1 8.8
19 800.2 7.9
20 1067.1 8.2
21 1423.0 9.6
22 1897.6 11.9

```

 Data List

Station No. 2

 SIMULATION MODEL No. 2

Layer No. R (ohm-m) Thickness (m)

Layer No.	R (ohm-m)	Thickness (m)
1	39.0	1.2
2	13.0	42.8
3	190.0	INFINITE

 Calculated Values MODEL No. 2

< No. > < AB/2(m) > < A.R. (ohm-m) >

< No. >	< AB/2(m) >	< A.R. (ohm-m) >
1	4.5	17.3
2	6.0	15.0
3	8.0	14.0
4	10.7	13.5
5	14.2	13.3
6	19.0	13.4
7	25.3	13.6
8	33.7	14.3
9	45.0	15.7
10	60.0	18.2
11	80.0	22.4
12	106.7	28.3
13	142.3	35.9
14	189.8	45.4
15	253.1	56.6
16	337.5	69.6
17	450.0	84.2
18	600.1	99.8
19	800.2	115.9
20	1067.1	131.5
21	1423.0	145.8
22	1897.6	158.2

No.	AB/2(m)	MM/2(m)	V (mV)	I (mA)	G.C.	A.R. (ohm-m)
(1)	4.5	0.6	6.41E+01	200	5.21E+01	17
(2)	6.0	0.6	3.36E+01	200	9.33E+01	16
(3)	8.0	0.6	1.76E+01	200	1.67E+02	15
(4)	10.0	0.6	1.68E+01	300	2.61E+02	15
(5)	14.0	0.6	8.56E+00	300	5.12E+02	15
(6)	14.0	3.0	4.04E+01	300	9.79E+01	13
(7)	20.0	0.6	4.26E+00	300	1.05E+03	15
(8)	20.0	3.0	1.94E+01	300	2.05E+02	13
(9)	27.0	3.0	1.14E+01	300	3.77E+02	14
(10)	35.0	3.0	9.61E+00	400	6.37E+02	15
(11)	45.0	3.0	6.43E+00	400	1.06E+03	17
(12)	60.0	3.0	4.16E+00	400	1.88E+03	20
(13)	80.0	3.0	2.73E+00	400	3.35E+03	23
(14)	80.0	15.0	1.35E+01	400	6.47E+02	22
(15)	100.0	3.0	2.55E+00	500	5.23E+03	27
(16)	100.0	15.0	1.25E+01	500	1.02E+03	26
(17)	140.0	15.0	9.94E+00	600	2.03E+03	34
(18)	200.0	15.0	6.44E+00	600	4.17E+03	45
(19)	270.0	15.0	5.91E+00	800	7.61E+03	56
(20)	270.0	50.0	1.94E+01	800	2.21E+03	54
(21)	350.0	15.0	4.24E+00	800	1.28E+04	68
(22)	350.0	50.0	1.38E+01	800	3.77E+03	65
(23)	450.0	50.0	1.03E+01	800	6.28E+03	81
(24)	600.0	50.0	7.00E+00	800	1.12E+04	98
(25)	800.0	50.0	4.55E+00	800	2.00E+04	114
(26)	1000.0	50.0	3.64E+00	900	3.13E+04	127
(27)	1250.0	50.0	2.51E+00	900	4.90E+04	137
(28)	1500.0	50.0	1.84E+00	900	7.06E+04	144

 SIMULATION MODEL No. 3

 Data List
 Station No. 3

No.	AB/2(m)	MN/2(m)	V(mv)	I(mA)	G.C.	A.R.(ohm-m)	Layer No.	R (ohm-m)	Thickness(m)
(1)	4.5	0.6	3.59E+02	200	5.21E+01	93	1	150.0	2.7
(2)	6.0	0.6	1.55E+02	200	9.33E+01	72	2	8.0	1.7
(3)	8.0	0.6	5.44E+01	200	1.67E+02	45	3	15.0	63.6
(4)	10.0	0.6	2.17E+01	200	2.61E+02	28	4	33.0	672.0
(5)	14.0	0.6	9.10E+00	300	5.12E+02	16	5	260.0	INFINITE
(6)	14.0	3.0	4.16E+01	300	9.79E+01	14			
(7)	20.0	0.6	2.59E+00	150	1.05E+03	18			
(8)	20.0	3.0	1.13E+01	150	2.05E+02	15			
(9)	27.0	3.0	4.12E+00	100	3.77E+02	16			
(10)	35.0	3.0	5.07E+00	200	6.37E+02	16			
(11)	45.0	3.0	4.76E+00	300	1.06E+03	17			
(12)	60.0	3.0	3.30E+00	400	1.88E+03	16			
(13)	80.0	3.0	2.09E+00	400	3.35E+03	17			
(14)	80.0	15.0	8.31E+00	400	6.47E+02	13			
(15)	100.0	3.0	2.29E+00	500	5.23E+03	24			
(16)	100.0	15.0	7.13E+00	500	1.02E+03	15			
(17)	140.0	15.0	4.93E+00	600	2.03E+03	17			
(18)	200.0	15.0	2.85E+00	600	4.17E+03	20			
(19)	270.0	15.0	1.73E+00	600	7.61E+03	22			
(20)	270.0	50.0	6.73E+00	600	2.21E+03	25			
(21)	350.0	15.0	1.49E+00	700	1.28E+04	27			
(22)	350.0	50.0	5.83E+00	700	3.77E+03	31			
(23)	450.0	50.0	3.88E+00	800	6.28E+03	30			
(24)	600.0	50.0	2.19E+00	800	1.12E+04	31			
(25)	800.0	50.0	1.49E+00	800	2.00E+04	37			
(26)	1000.0	50.0	1.10E+00	800	3.13E+04	43			

 Calculated Values MODEL No. 3

< No.	>	< AB/2(m)	>	< A.R. (ohm-m)	>
1		4.5		91.2	
2		6.0		62.6	
3		8.0		37.8	
4		10.7		22.6	
5		14.2		16.6	
6		19.0		15.2	
7		25.3		15.0	
8		33.7		15.1	
9		45.0		15.3	
10		60.0		15.8	
11		80.0		16.6	
12		106.7		17.9	
13		142.3		19.8	
14		189.8		22.1	
15		253.1		24.6	
16		337.5		27.0	
17		450.0		29.5	
18		600.1		32.4	
19		800.2		36.2	
20		1057.1		42.0	

 SIMULATION MODEL No. 4

Layer No.	R (ohm-m)	Thickness (m)
1	265.0	2.6
2	745.0	4.6
3	26.0	16.8
4	1300.0	INFINITE

 Calculated Values MODEL No. 4

< No. >	< AB/2(m) >	< A.R. (ohm-m) >
1	4.5	328.8
2	6.0	357.5
3	8.0	376.5
4	10.7	369.7
5	14.2	326.3
6	19.0	250.7
7	25.3	166.6
8	33.7	104.8
9	45.0	80.7
10	60.0	87.7
11	80.0	111.7
12	106.7	144.9
13	142.3	187.0
14	189.8	239.5
15	253.1	303.4
16	337.5	379.4
17	450.0	467.7
18	600.1	566.6
19	800.2	673.2
20	1067.1	783.1
21	1423.0	890.5
22	1897.6	989.8

 Data List
 Station No. 4

No.	AB/2(m)	MIN/2(m)	V(mV)	I(mA)	G.C.	A.R. (ohm-m)
(1)	4.5	0.6	1.34E+03	200	5.21E+01	349
(2)	6.0	0.6	8.24E+02	200	9.33E+01	384
(3)	8.0	0.6	7.27E+02	300	1.67E+02	404
(4)	10.0	0.6	4.59E+02	300	2.61E+02	399
(5)	14.0	0.6	2.76E+02	400	5.12E+02	353
(6)	14.0	3.0	1.20E+03	400	9.79E+01	293
(7)	20.0	0.6	1.03E+02	400	1.05E+03	268
(8)	20.0	3.0	4.24E+02	400	2.05E+02	217
(9)	27.0	3.0	1.48E+02	400	3.77E+02	139
(10)	35.0	3.0	6.11E+01	400	6.37E+02	97
(11)	45.0	3.0	2.28E+01	300	1.06E+03	80
(12)	60.0	3.0	1.90E+01	400	1.88E+03	89
(13)	80.0	3.0	1.35E+01	400	3.35E+03	113
(14)	80.0	15.0	6.71E+01	400	6.47E+02	108
(15)	100.0	3.0	1.30E+01	500	5.23E+03	136
(16)	100.0	15.0	6.44E+01	500	1.02E+03	132
(17)	140.0	15.0	4.24E+01	500	2.03E+03	172
(18)	200.0	15.0	3.76E+01	600	4.17E+03	261
(19)	270.0	15.0	3.03E+01	700	7.61E+03	329
(20)	270.0	50.0	1.09E+02	700	2.21E+03	343
(21)	350.0	15.0	2.01E+01	700	1.28E+04	368
(22)	350.0	50.0	7.22E+01	700	3.77E+03	389
(23)	450.0	50.0	6.23E+01	800	6.28E+03	489
(24)	600.0	50.0	4.69E+01	800	1.12E+04	658
(25)	800.0	50.0	2.36E+01	700	2.00E+04	675
(26)	1000.0	50.0	1.72E+01	800	3.13E+04	674
(27)	1250.0	50.0	1.28E+01	800	4.90E+04	784
(28)	1500.0	50.0	1.14E+01	900	7.06E+04	894

 Data List
 Station No. 5
 SIMULATION MODEL No. 5

No.	AB/2(m)	MN/2(m)	V(mV)	I(mA)	G.C.	A.R.(ohm-m)	Layer No.	R (ohm-m)	Thickness(m)
(1)	4.5	0.6	3.23E+00	200	5.21E+01	1	1500.0	2.9	
(2)	6.0	0.6	1.61E+03	200	9.33E+01	753	200.0	6.0	
(3)	8.0	0.6	5.30E+02	200	1.67E+02	442	45.0	53.1	
(4)	10.0	0.6	2.06E+02	200	2.61E+02	269	180.0	108.0	
(5)	14.0	0.6	6.88E+01	200	5.12E+02	176	240.0	INFINITE	
(6)	14.0	3.0	4.13E+02	200	9.79E+01	202			
(7)	20.0	0.6	2.58E+01	300	1.05E+03	90			
(8)	20.0	3.0	1.48E+02	300	2.05E+02	101			
(9)	27.0	3.0	4.85E+01	300	3.77E+02	61			
(10)	35.0	3.0	2.59E+01	300	6.37E+02	55			
(11)	45.0	3.0	1.45E+01	300	1.06E+03	51			
(12)	60.0	3.0	8.12E+00	300	1.88E+03	51			
(13)	80.0	3.0	6.42E+00	400	3.35E+03	54			
(14)	80.0	15.0	3.45E+01	400	6.47E+02	56			
(15)	100.0	3.0	4.44E+00	400	5.23E+03	58			
(16)	100.0	15.0	2.36E+01	400	1.02E+03	60			
(17)	140.0	15.0	1.93E+01	520	2.03E+03	75			
(18)	200.0	15.0	1.43E+01	610	4.17E+03	98			
(19)	270.0	15.0	9.13E+00	600	7.61E+03	116			
(20)	270.0	50.0	3.36E+01	600	2.21E+03	124			
(21)	350.0	15.0	7.38E+00	800	1.28E+04	118			
(22)	350.0	50.0	2.69E+01	800	3.77E+03	127			
(23)	450.0	50.0	1.81E+01	800	6.28E+03	142			
(24)	600.0	50.0	9.19E+00	600	1.12E+04	172			
(25)	800.0	50.0	5.72E+00	600	2.00E+04	191			
(26)	1000.0	50.0	4.25E+00	700	3.13E+04	190			
(27)	1250.0	50.0	2.91E+00	700	4.90E+04	204			
(28)	1500.0	50.0	2.17E+00	700	7.06E+04	219			

 Calculated Values MODEL No. 5

< No. >	< AB/2(m) >	< A.R.(ohm-m) >
1	4.5	1032.2
2	6.0	768.6
3	8.0	503.9
4	10.7	299.6
5	14.2	174.4
6	19.0	107.1
7	25.3	72.3
8	33.7	56.5
9	45.0	52.2
10	60.0	53.6
11	80.0	58.6
12	106.7	67.5
13	142.3	80.1
14	189.8	95.2
15	253.1	112.0
16	337.5	130.3
17	450.0	149.2
18	600.1	167.8
19	800.2	185.1
20	1067.1	200.2
21	1423.0	212.7
22	1897.6	222.2

***** Data List ***** Station No. 6 ***** SIMULATION MODEL No. 6 *****

 Data List
 Station No. 7
 SIMULATION MODEL No. 7

No.	AB/2(m)	HN/2(m)	V(mV)	I(mA)	G.C.	A.R.(ohm-m)	Layer No.	R (ohm-m)	Thickness(m)
(1)	4.5	0.6	2.47E+02	300	5.21E+01	43	1	43.0	7.1
(2)	6.0	0.6	1.35E+02	300	9.33E+01	42	2	10.0	152.9
(3)	8.0	0.6	4.42E+01	200	1.67E+02	37	3	5.0	320.0
(4)	10.0	0.6	2.68E+01	200	2.61E+02	35	4	2600.0	INFINITE
(5)	14.0	0.6	1.93E+01	400	5.12E+02	25			
(6)	14.0	3.0	1.15E+02	400	9.79E+01	28			
(7)	20.0	0.6	6.20E+00	400	1.05E+03	16			
(8)	20.0	3.0	3.60E+01	400	2.05E+02	18			
(9)	27.0	3.0	1.31E+01	400	3.77E+02	12			
(10)	35.0	3.0	6.67E+00	400	6.37E+02	11			
(11)	45.0	3.0	4.14E+00	400	1.06E+03	11			
(12)	60.0	3.0	2.13E+00	400	1.88E+03	10			
(13)	80.0	3.0	1.17E+00	400	3.35E+03	10			
(14)	80.0	15.0	7.18E+00	400	6.47E+02	12			
(15)	100.0	3.0	9.11E-01	500	5.23E+03	10			
(16)	100.0	15.0	5.46E+00	500	1.02E+03	11			
(17)	140.0	15.0	3.10E+00	600	2.03E+03	10			
(18)	200.0	15.0	1.32E+00	600	4.17E+03	9			
(19)	270.0	15.0	8.52E-01	800	7.61E+03	8			
(20)	270.0	50.0	2.95E+00	800	2.21E+03	8			
(21)	350.0	15.0	4.84E-01	800	1.28E+04	8			
(22)	350.0	50.0	1.65E+00	800	3.77E+03	8			
(23)	450.0	50.0	9.70E-01	800	6.28E+03	8			
(24)	600.0	50.0	4.91E-01	700	1.12E+04	8			
(25)	800.0	50.0	3.91E-01	800	2.00E+04	10			
(26)	1000.0	50.0	3.09E-01	800	3.13E+04	12			
(27)	1250.0	50.0	2.61E-01	800	4.90E+04	16			
(28)	1500.0	50.0	2.36E-01	800	7.06E+04	21			

 Calculated Values MODEL No. 7

< No. >	< AB/2(m) >	< A.R.(ohm-m) >
1	4.5	41.6
2	6.0	40.1
3	8.0	37.2
4	10.7	32.6
5	14.2	26.5
6	19.0	20.1
7	25.3	15.2
8	33.7	12.3
9	45.0	11.0
10	60.0	10.4
11	80.0	10.1
12	106.7	9.9
13	142.3	9.6
14	189.8	9.2
15	253.1	8.7
16	337.5	8.1
17	450.0	7.9
18	600.1	8.5
19	800.2	10.3
20	1067.1	13.3
21	1423.0	17.6
22	1897.6	23.4

 Data List

 Station No. 8

 SIMULATION MODEL No. 8

No.	AB/2(m)	MIN/2(m)	V(mV)	I(mA)	G.C.	A.R.(ohm-m)	Layer No.	R (ohm-m)	Thickness(m)
(1)	4.5	0.6	2.74E+03	300	5.21E+01	476	1	410.0	4.7
(2)	6.0	0.6	1.86E+03	400	9.33E+01	433	2	300.0	35.3
(3)	8.0	0.6	7.89E+02	300	1.67E+02	438	3	46.0	180.0
(4)	10.0	0.6	5.33E+02	300	2.61E+02	463	4	12.0	840.0
(5)	14.0	0.6	2.86E+02	400	5.12E+02	366	5	5000.0	INFINITE
(6)	14.0	3.0	1.36E+03	400	9.79E+01	333			
(7)	20.0	0.6	1.44E+02	400	1.05E+03	377			
(8)	20.0	3.0	6.65E+02	400	2.05E+02	340			
(9)	27.0	3.0	2.47E+02	300	3.77E+02	310			
(10)	35.0	3.0	8.62E+01	200	6.37E+02	274			
(11)	45.0	3.0	9.00E+01	400	1.06E+03	238			
(12)	60.0	3.0	5.81E+01	400	1.88E+03	273			
(13)	80.0	3.0	9.90E+00	200	3.35E+03	166			
(14)	80.0	15.0	4.63E+01	200	6.47E+02	150			
(15)	100.0	3.0	9.50E+00	400	5.23E+03	124			
(16)	100.0	15.0	4.37E+01	400	1.02E+03	112			
(17)	140.0	15.0	2.66E+01	700	2.03E+03	77			
(18)	200.0	15.0	9.13E+00	800	4.17E+03	48			
(19)	270.0	15.0	3.72E+00	800	7.61E+03	35			
(20)	270.0	50.0	1.34E+01	800	2.21E+03	37			
(21)	350.0	15.0	1.62E+00	700	1.28E+04	30			
(22)	350.0	50.0	5.68E+00	700	3.77E+03	31			
(23)	450.0	50.0	3.36E+00	800	6.28E+03	26			
(24)	600.0	50.0	1.56E+00	800	1.12E+04	22			
(25)	800.0	50.0	7.32E-01	800	2.00E+04	18			
(26)	1000.0	50.0	3.79E-01	700	3.13E+04	17			
(27)	1250.0	50.0	3.01E-01	800	4.90E+04	18			
(28)	1500.0	50.0	3.13E-01	1000	7.06E+04	22			

 Calculated Values MODEL No. 8

< No. >	< AB/2(m) >	< A.R.(ohm-m) >
1	4.5	400.0
2	6.0	390.6
3	8.0	376.1
4	10.7	357.5
5	14.2	337.9
6	19.0	319.7
7	25.3	302.7
8	33.7	283.0
9	45.0	255.0
10	60.0	214.2
11	80.0	163.1
12	106.7	112.7
13	142.3	75.1
14	189.8	53.7
15	253.1	42.4
16	337.5	34.1
17	450.0	26.5
18	600.1	20.5
19	800.2	17.4
20	1067.1	17.3
21	1423.0	20.0
22	1897.6	25.4

 Data List
 Station No. 9
 SIMULATION MODEL No. 9

No.	AB/2(m)	MN/2(m)	V(mv)	I(mA)	G.C.	A.R.(ohm-m)	Layer No.	R (ohm-m)	Thickness(m)
(1)	4.5	0.6	1.83E+03	300	5.21E+01	318	1	345.0	4.3
(2)	6.0	0.6	1.29E+03	400	9.33E+01	301	2	120.0	23.7
(3)	8.0	0.6	6.32E+02	400	1.67E+02	263	3	29.0	30.0
(4)	10.0	0.6	3.43E+02	400	2.61E+02	224	4	160.0	INFINITE
(5)	14.0	0.6	1.43E+02	400	5.12E+02	183			
(6)	14.0	3.0	6.74E+02	400	9.79E+01	165			
(7)	20.0	0.6	4.03E+01	300	1.05E+03	141			
(8)	20.0	3.0	1.87E+02	300	2.05E+02	128			
(9)	27.0	3.0	1.16E+02	400	3.77E+02	109			
(10)	35.0	3.0	6.55E+01	400	6.37E+02	104			
(11)	35.0	3.0	8.18E+01	500	6.37E+02	104			
(12)	45.0	3.0	3.82E+01	400	1.06E+03	101			
(13)	45.0	3.0	4.77E+01	500	1.06E+03	101			
(14)	60.0	3.0	1.89E+01	500	1.88E+03	71			
(15)	80.0	3.0	7.74E+00	400	3.35E+03	65			
(16)	80.0	15.0	4.02E+01	400	6.47E+02	65			
(17)	100.0	3.0	5.14E+00	400	5.23E+03	67			
(18)	100.0	15.0	2.62E+01	400	1.02E+03	67			
(19)	140.0	15.0	2.95E+01	700	2.03E+03	86			
(20)	200.0	15.0	1.94E+01	800	4.17E+03	101			
(21)	270.0	15.0	1.21E+01	800	7.61E+03	115			
(22)	270.0	50.0	3.62E+01	800	2.21E+03	100			
(23)	350.0	15.0	7.38E+00	800	1.28E+04	118			
(24)	350.0	50.0	2.18E+01	800	3.77E+03	103			
(25)	450.0	50.0	1.46E+01	800	6.28E+03	115			
(26)	600.0	50.0	8.09E+00	700	1.12E+04	130			
(27)	800.0	50.0	5.66E+00	800	2.00E+04	142			
(28)	1000.0	50.0	3.86E+00	800	3.13E+04	151			
(29)	1250.0	50.0	2.26E+00	700	4.90E+04	158			
(30)	1500.0	50.0	2.22E+00	1000	7.06E+04	157			

 Calculated Values MODEL No. 9

< No. >	< AB/2(m) >	< A.R. (ohm-m) >
1	4.5	313.9
2	6.0	287.2
3	8.0	249.3
4	10.7	206.3
5	14.2	167.9
6	19.0	140.2
7	25.3	121.5
8	33.7	106.0
9	45.0	90.2
10	60.0	75.4
11	80.0	66.6
12	106.7	66.8
13	142.3	74.8
14	189.8	86.7
15	253.1	99.7
16	337.5	112.4
17	450.0	124.1
18	600.1	134.2
19	800.2	142.3
20	1067.1	148.4
21	1423.0	152.7
22	1897.6	155.6

 SIMULATION MODEL No. 10

 Data List
 Station No. 10

No.	AB/2(m)	MN/2(m)	V(mV)	I(mA)	G.C.	A.R. (ohm·m)	Layer No.	R (ohm·m)	Thickness(m)
(1)	4.5	0.6	1.33E+03	500	5.21E+01	139	1	72.0	1.4
(2)	6.0	0.6	8.12E+02	500	9.33E+01	152	2	355.0	3.3
(3)	8.0	0.6	4.96E+02	500	1.67E+02	165	3	38.0	135.3
(4)	10.0	0.6	3.22E+02	500	2.61E+02	168	4	18.0	270.0
(5)	14.0	0.6	1.58E+02	500	5.12E+02	162	5	2700.0	INFINITE
(6)	14.0	3.0	6.90E+02	500	9.79E+01	135			
(7)	20.0	0.6	3.68E+01	500	1.05E+03	77			
(8)	20.0	3.0	1.59E+02	500	2.05E+02	65			
(9)	27.0	3.0	7.84E+01	500	3.77E+02	59			
(10)	35.0	3.0	4.12E+01	500	6.37E+02	52			
(11)	45.0	3.0	2.24E+01	500	1.06E+03	47			
(12)	60.0	3.0	1.22E+01	500	1.88E+03	46			
(13)	80.0	3.0	7.71E+00	600	3.35E+03	43			
(14)	80.0	15.0	3.69E+01	600	6.47E+02	40			
(15)	100.0	3.0	4.01E+00	500	5.23E+03	42			
(16)	100.0	15.0	1.80E+01	500	1.02E+03	37			
(17)	140.0	15.0	1.55E+01	800	2.03E+03	39			
(18)	200.0	15.0	5.15E+00	600	4.17E+03	36			
(19)	270.0	15.0	3.31E+00	800	7.61E+03	31			
(20)	270.0	50.0	1.06E+01	800	2.21E+03	29			
(21)	350.0	15.0	1.72E+00	700	1.28E+04	31			
(22)	350.0	50.0	5.49E+00	700	3.77E+03	30			
(23)	450.0	50.0	3.57E+00	800	6.28E+03	28			
(24)	600.0	50.0	2.23E+00	800	1.12E+04	31			
(25)	800.0	50.0	1.46E+00	700	2.00E+04	42			
(26)	1000.0	50.0	1.18E+00	700	3.13E+04	53			
(27)	1250.0	50.0	1.09E+00	800	4.90E+04	67			
(28)	1500.0	50.0	8.86E-01	800	7.06E+04	78			

 Calculated Values MODEL No. 10

< No. >	< AB/2(m) >	< A.R. (ohm·m) >
1	4.5	139.6
2	6.0	153.9
3	8.0	158.9
4	10.7	150.4
5	14.2	128.1
6	19.0	98.2
7	25.3	70.6
8	33.7	52.2
9	45.0	43.4
10	60.0	40.1
11	80.0	38.6
12	106.7	37.4
13	142.3	36.0
14	189.8	34.0
15	253.1	31.7
16	337.5	29.8
17	450.0	30.1
18	600.1	34.2
19	800.2	42.7
20	1067.1	55.9
21	1423.0	74.1
22	1897.6	98.1

 Data List
 Station No. 11
 SIMULATION MODEL No. 11

No.	AB/2(m)	MN/2(m)	V(mV)	I(mA)	G.C.	A.R.(ohm-m)	Layer No.	R (ohm-m)	Thickness(m)
(1)	4.5	0.6	2.26E+02	500	5.21E+01	24	1	40.0	2.0
(2)	6.0	0.6	9.98E+01	500	9.33E+01	19	2	9.7	21.0
(3)	8.0	0.6	4.72E+01	500	1.67E+02	16	3	240.0	48.0
(4)	10.0	0.6	2.75E+01	500	2.61E+02	14	4	3.6	229.0
(5)	14.0	0.6	1.32E+01	500	5.12E+02	14	5	2600.0	INFINITE
(6)	14.0	0.6	1.32E+01	500	5.12E+02	14			
(7)	14.0	3.0	5.73E+01	500	9.79E+01	11			
(8)	20.0	0.6	6.47E+00	500	1.05E+03	14			
(9)	20.0	3.0	2.66E+01	500	2.05E+02	11			
(10)	27.0	3.0	2.00E+01	600	3.77E+02	13			
(11)	35.0	3.0	1.38E+01	600	6.37E+02	15			
(12)	45.0	3.0	1.03E+01	600	1.06E+02	18			
(13)	60.0	3.0	7.43E+00	600	1.88E+03	23			
(14)	80.0	3.0	5.09E+00	600	3.35E+03	28			
(15)	80.0	15.0	2.45E+01	600	6.47E+02	26			
(16)	100.0	3.0	3.65E+00	600	5.23E+03	32			
(17)	100.0	15.0	1.74E+01	600	1.02E+03	30			
(18)	140.0	15.0	1.31E+01	700	2.03E+03	38			
(19)	200.0	15.0	6.24E+00	600	4.17E+03	43			
(20)	270.0	15.0	3.48E+00	600	7.61E+03	44			
(21)	270.0	50.0	1.33E+01	600	2.21E+03	49			
(22)	350.0	15.0	2.62E+00	800	1.28E+04	42			
(23)	350.0	50.0	1.00E+01	800	3.77E+03	47			
(24)	450.0	50.0	4.75E+00	800	6.28E+03	37			
(25)	600.0	50.0	1.38E+00	700	1.12E+04	22			
(26)	800.0	50.0	5.52E-01	600	2.00E+04	18			
(27)	1000.0	50.0	3.21E-01	600	3.13E+04	17			
(28)	1250.0	50.0	2.72E-01	700	4.90E+04	19			
(29)	1500.0	50.0	2.16E-01	600	7.06E+04	25			

 Calculated Values MODEL No. 11

 < No. > < AB/2(m) > < A.R.(ohm-m) >

1	4.5	22.5
2	6.0	17.1
3	8.0	13.4
4	10.7	11.5
5	14.2	11.0
6	19.0	11.4
7	25.3	12.7
8	33.7	15.0
9	45.0	18.7
10	60.0	23.6
11	80.0	29.5
12	106.7	35.8
13	142.3	41.6
14	189.8	45.6
15	253.1	46.3
16	337.5	42.4
17	450.0	34.4
18	600.1	25.4
19	800.2	19.1
20	1067.1	18.0
21	1423.0	21.5
22	1897.6	28.2

 SIMULATION MODEL No. 12

 Station No. 12
 Data List

No.	AB/2(m)	NN/2(m)	V(mV)	I(mA)	G.C.	A.R.(ohm-m)	Layer No.	R (ohm-m)	Thickness(m)
(1)	4.5	0.6	1.60E+03	400	5.21E+01	208	1	415.0	2.1
(2)	6.0	0.6	4.67E+02	300	9.33E+01	145	2	29.0	3.5
(3)	8.0	0.6	2.23E+02	400	1.67E+02	93	3	390.0	12.4
(4)	10.0	0.6	8.72E+01	300	2.61E+02	76	4	16.0	362.0
(5)	14.0	0.6	5.38E+01	300	5.12E+02	92	5	76.0	INFINITE
(6)	14.0	3.0	2.61E+02	300	9.79E+01	85			
(7)	20.0	0.6	5.06E+01	500	1.05E+03	106			
(8)	20.0	3.0	2.42E+02	500	2.05E+02	99			
(9)	27.0	3.0	1.52E+02	500	3.77E+02	115			
(10)	35.0	3.0	1.06E+02	500	6.37E+02	135			
(11)	45.0	3.0	5.75E+01	500	1.06E+03	121			
(12)	60.0	3.0	3.39E+01	600	1.88E+03	106			
(13)	80.0	3.0	1.36E+01	600	3.35E+03	76			
(14)	80.0	15.0	6.33E+01	600	6.47E+02	68			
(15)	100.0	3.0	5.60E+00	600	5.23E+03	49			
(16)	100.0	15.0	2.73E+01	600	1.02E+03	47			
(17)	140.0	15.0	7.50E+00	500	2.03E+03	30			
(18)	200.0	15.0	4.01E+00	800	4.17E+03	21			
(19)	270.0	15.0	2.25E+00	800	7.61E+03	21			
(20)	270.0	50.0	7.13E+00	800	2.21E+03	20			
(21)	350.0	15.0	1.34E+00	800	1.28E+04	21			
(22)	350.0	50.0	4.09E+00	800	3.77E+03	19			
(23)	450.0	50.0	1.97E+00	600	6.28E+03	21			
(24)	600.0	50.0	1.43E+00	700	1.12E+04	23			
(25)	800.0	50.0	1.08E+00	800	2.00E+04	27			
(26)	1000.0	50.0	7.50E-01	800	3.13E+04	29			
(27)	1250.0	50.0	6.76E-01	1000	4.90E+04	33			
(28)	1500.0	50.0	5.91E-01	1000	7.06E+04	42			

 Calculated Values MODEL No. 12

< No. >	< AB/2(m) >	< A.R.(ohm-m) >
1	4.5	190.2
2	6.0	123.0
3	8.0	84.3
4	10.7	76.4
5	14.2	86.8
6	19.0	102.5
7	25.3	116.6
8	33.7	124.4
9	45.0	121.7
10	60.0	106.2
11	80.0	80.6
12	106.7	53.2
13	142.3	32.6
14	189.8	21.9
15	253.1	18.5
16	337.5	18.4
17	450.0	19.7
18	600.1	22.4
19	800.2	26.5
20	1067.1	31.7
21	1423.0	37.7
22	1897.6	44.0

 Data List
 Station No. 13
 SIMULATION MODEL No. 13

No.	AB/2(m)	MM/2(m)	V(mV)	I(mA)	G.C.	A.R.(ohm·m)	Layer No.	R (ohm·m)	Thickness(m)
(1)	4.5	0.6	2.00E+03	500	5.21E+01	208	1	890.0	1.4
(2)	6.0	0.6	6.85E+02	500	9.33E+01	128	2	64.0	7.8
(3)	8.0	0.6	2.04E+02	500	1.67E+02	68	3	16.0	312.8
(4)	10.0	0.6	1.13E+02	500	2.61E+02	59	4	54.0	INFINITE
(5)	14.0	0.6	4.57E+01	500	5.12E+02	47			
(6)	14.0	3.0	2.25E+02	500	9.79E+01	44			
(7)	20.0	0.6	2.18E+01	600	1.05E+03	38			
(8)	20.0	3.0	9.50E+01	600	2.05E+02	32			
(9)	27.0	0.6	5.04E+00	400	1.91E+02	24			
(10)	27.0	3.0	2.81E+01	500	3.77E+02	21			
(11)	35.0	3.0	1.79E+01	600	6.37E+02	19			
(12)	45.0	3.0	1.15E+01	600	1.06E+03	20			
(13)	60.0	3.0	6.01E+00	600	1.88E+03	19			
(14)	80.0	3.0	3.73E+00	700	3.35E+03	18			
(15)	80.0	15.0	1.78E+01	700	6.47E+02	16			
(16)	100.0	3.0	2.22E+00	700	5.23E+03	17			
(17)	100.0	15.0	1.03E+01	700	1.02E+03	15			
(18)	140.0	15.0	5.83E+00	800	2.03E+03	15			
(19)	200.0	15.0	3.32E+00	900	4.17E+03	15			
(20)	270.0	15.0	1.56E+00	700	7.61E+03	17			
(21)	270.0	50.0	5.55E+00	700	2.21E+03	18			
(22)	350.0	15.0	1.12E+00	800	1.28E+04	18			
(23)	350.0	50.0	3.86E+00	800	3.77E+03	18			
(24)	450.0	50.0	2.78E+00	900	6.28E+03	19			
(25)	600.0	50.0	1.38E+00	700	1.12E+04	22			
(26)	800.0	50.0	1.00E+00	800	2.00E+04	25			
(27)	1000.0	50.0	5.77E-01	700	3.13E+04	26			
(28)	1250.0	50.0	4.84E-01	700	4.90E+04	34			
(29)	1500.0	50.0	3.53E-01	700	7.06E+04	36			

 Calculated Values MODEL No. 13

< No. >	< AB/2(m) >	< A.R.(ohm·m) >
1	4.5	186.9
2	6.0	105.1
3	8.0	70.7
4	10.7	56.7
5	14.2	46.0
6	19.0	35.4
7	25.3	26.6
8	33.7	20.9
9	45.0	17.9
10	60.0	16.8
11	80.0	16.4
12	106.7	16.2
13	142.3	16.1
14	189.8	16.4
15	253.1	16.9
16	337.5	17.9
17	450.0	19.7
18	600.1	22.6
19	800.2	26.4
20	1067.1	30.7
21	1423.0	35.2
22	1897.6	39.4

 SIMULATION MODEL No. 14

 Station No. 14
 Data List

No.	AB/2(m)	MN/2(m)	V(mV)	I(mA)	G.C.	A.R. (ohm-m)	Layer No.	R (ohm-m)	Thickness(m)
(1)	4.5	0.6	4.87E+02	400	5.21E+01	63	1	270.0	1.5
(2)	6.0	0.6	1.47E+02	400	9.33E+01	34	2	12.0	4.0
(3)	8.0	0.6	7.20E+01	500	1.67E+02	24	3	62.0	10.5
(4)	10.0	0.6	4.49E+01	500	2.61E+02	23	4	6.6	25.0
(5)	14.0	0.6	2.74E+01	500	5.12E+02	28	5	31.0	INFINITE
(6)	14.0	3.0	1.33E+02	500	9.79E+01	26			
(7)	20.0	0.6	1.46E+01	500	1.05E+03	31			
(8)	20.0	3.0	6.74E+01	500	2.05E+02	28			
(9)	27.0	3.0	3.83E+01	500	3.77E+02	29			
(10)	35.0	3.0	2.21E+01	500	6.37E+02	28			
(11)	45.0	3.0	1.14E+01	500	1.06E+03	24			
(12)	60.0	3.0	6.81E+00	600	1.88E+03	21			
(13)	80.0	3.0	3.17E+00	600	3.35E+03	18			
(14)	80.0	15.0	1.58E+01	600	6.47E+02	17			
(15)	100.0	3.0	1.90E+00	600	5.23E+03	17			
(16)	100.0	15.0	8.85E+00	600	1.02E+03	15			
(17)	140.0	15.0	7.16E+00	800	2.03E+03	18			
(18)	200.0	15.0	3.98E+00	800	4.17E+03	21			
(19)	270.0	15.0	2.34E+00	800	7.61E+03	22			
(20)	270.0	50.0	8.45E+00	800	2.21E+03	23			
(21)	350.0	15.0	1.51E+00	800	1.28E+04	24			
(22)	350.0	50.0	5.24E+00	800	3.77E+03	25			
(23)	450.0	50.0	3.43E+00	800	6.28E+03	27			
(24)	600.0	50.0	1.73E+00	700	1.12E+04	28			
(25)	800.0	50.0	9.16E-01	700	2.00E+04	26			
(26)	1000.0	50.0	8.24E-01	800	3.13E+04	32			
(27)	1250.0	50.0	5.26E-01	800	4.90E+04	32			
(28)	1500.0	50.0	3.28E-01	800	7.06E+04	29			

 Calculated Values MODEL No. 14

< No. >	< AB/2(m) >	< A.R. (ohm-m) >
1	4.5	58.8
2	6.0	31.4
3	8.0	22.1
4	10.7	22.4
5	14.2	25.2
6	19.0	27.6
7	25.3	28.6
8	33.7	27.3
9	45.0	24.0
10	60.0	20.0
11	80.0	17.3
12	106.7	16.9
13	142.3	18.3
14	189.8	20.6
15	253.1	22.9
16	337.5	25.0
17	450.0	26.8
18	600.1	28.2
19	800.2	29.2
20	1067.1	29.9
21	1423.0	30.4
22	1897.6	30.7

 Data List
 Station No. 15

 SIMULATION MODEL No. 15

No.	AB/2(m)	MN/2(m)	V(mV)	I(mA)	G.C.	A.R. (ohm-m)	Layer No.	R (ohm-m)	Thickness(m)
(1)	4.5	0.6	3.67E+03	500	5.21E+01	382	1	400.0	7.7
(2)	6.0	0.6	2.35E+03	600	9.33E+01	365	2	51.0	20.3
(3)	8.0	0.6	1.24E+03	600	1.67E+02	344	3	8.5	102.0
(4)	10.0	0.6	7.57E+02	600	2.61E+02	329	4	30000.0	INFINITE
(5)	14.0	0.6	2.06E+02	500	5.12E+02	211			
(6)	14.0	3.0	1.21E+03	500	9.79E+01	237			
(7)	20.0	0.6	7.03E+01	600	1.05E+03	123			
(8)	20.0	3.0	4.09E+02	600	2.05E+02	140			
(9)	27.0	3.0	1.15E+02	600	3.77E+02	72			
(10)	35.0	3.0	5.11E+01	600	6.37E+02	54			
(11)	45.0	3.0	2.73E+01	700	1.06E+03	41			
(12)	60.0	3.0	9.23E+00	700	1.88E+03	25			
(13)	80.0	3.0	3.19E+00	600	3.35E+03	18			
(14)	80.0	15.0	1.46E+01	600	6.47E+02	16			
(15)	100.0	3.0	2.27E+00	700	5.23E+03	17			
(16)	100.0	15.0	9.93E+00	700	1.02E+03	15			
(17)	140.0	15.0	5.60E+00	800	2.03E+03	14			
(18)	200.0	15.0	3.32E+00	800	4.17E+03	17			
(19)	270.0	15.0	2.28E+00	800	7.61E+03	22			
(20)	270.0	50.0	7.26E+00	800	2.21E+03	20			
(21)	350.0	15.0	1.88E+00	900	1.28E+04	27			
(22)	350.0	50.0	6.05E+00	900	3.77E+03	25			
(23)	450.0	50.0	4.70E+00	900	6.28E+03	33			
(24)	600.0	50.0	3.54E+00	900	1.12E+04	44			
(25)	800.0	50.0	2.79E+00	900	2.00E+04	62			
(26)	1000.0	50.0	2.37E+00	900	3.13E+04	83			
(27)	1250.0	50.0	2.09E+00	900	4.90E+04	114			
(28)	1500.0	50.0	1.50E+00	800	7.06E+04	132			

 Calculated Values MODEL No. 15

 < No. > < AB/2(m) > < A.R. (ohm-m) >
 1 4.5 387.4
 2 6.0 372.9
 3 8.0 345.1
 4 10.7 298.4
 5 14.2 232.9
 6 19.0 160.5
 7 25.3 99.3
 8 33.7 59.3
 9 45.0 36.7
 10 60.0 23.4
 11 80.0 15.7
 12 106.7 12.5
 13 142.3 12.9
 14 189.8 15.5
 15 253.1 20.0
 16 337.5 26.6
 17 450.0 35.5
 18 600.1 47.4
 19 800.2 63.2
 20 1067.1 84.3
 21 1423.0 112.4
 22 1897.6 149.9

 SIMULATION MODEL No. 16

 Data List
 Station No. 16

No.	AB/2(m)	MN/2(m)	V(mv)	I(mA)	G.C.	A.R.(ohm-m)	Layer No.	R (ohm-m)	Thickness(m)
(1)	4.5	0.6	1.99E+03	600	5.21E+01	173	1	305.0	2.8
(2)	6.0	0.6	1.02E+03	620	9.33E+01	154	2	47.0	43.2
(3)	8.0	0.6	4.04E+02	620	1.67E+02	109	3	11.0	124.0
(4)	10.0	0.6	1.86E+02	600	2.61E+02	81	4	24000.0	INFINITE
(5)	14.0	0.6	6.50E+01	600	5.12E+02	55			
(6)	14.0	3.0	3.30E+02	600	9.79E+01	54			
(7)	20.0	0.6	3.43E+01	700	1.05E+03	51			
(8)	20.0	3.0	1.65E+02	700	2.05E+02	48			
(9)	27.0	3.0	8.41E+01	700	3.77E+02	45			
(10)	35.0	3.0	4.74E+01	700	6.37E+02	43			
(11)	45.0	3.0	2.79E+01	700	1.06E+03	42			
(12)	60.0	3.0	1.28E+01	700	1.88E+03	34			
(13)	80.0	3.0	7.03E+00	800	3.35E+03	29			
(14)	80.0	15.0	4.43E+01	800	6.47E+02	36			
(15)	100.0	3.0	3.24E+00	700	5.23E+03	24			
(16)	100.0	15.0	2.02E+01	700	1.02E+03	30			
(17)	140.0	15.0	9.53E+00	900	2.03E+03	21			
(18)	200.0	15.0	4.62E+00	970	4.17E+03	20			
(19)	270.0	15.0	2.82E+00	980	7.61E+03	22			
(20)	270.0	50.0	1.03E+01	980	2.21E+03	23			
(21)	350.0	15.0	1.95E+00	1000	1.28E+04	25			
(22)	350.0	50.0	7.08E+00	1000	3.77E+03	27			
(23)	450.0	50.0	5.31E+00	1000	6.28E+03	33			
(24)	600.0	50.0	2.78E+00	700	1.12E+04	45			
(25)	800.0	50.0	2.50E+00	700	2.00E+04	72			
(26)	1000.0	50.0	2.62E+00	900	3.13E+04	91			
(27)	1250.0	50.0	2.05E+00	900	4.90E+04	112			
(28)	1500.0	50.0	1.91E+00	1000	7.06E+04	135			

 Calculated Values MODEL No. 16

< No.	>	< AB/2(m)	>	< A.R.(ohm-m)	>
1	>	4.5	>	208.9	>
2	>	6.0	>	157.7	>
3	>	8.0	>	109.1	>
4	>	10.7	>	74.9	>
5	>	14.2	>	57.5	>
6	>	19.0	>	50.7	>
7	>	25.3	>	47.8	>
8	>	33.7	>	45.4	>
9	>	45.0	>	42.4	>
10	>	60.0	>	37.9	>
11	>	80.0	>	31.7	>
12	>	106.7	>	25.2	>
13	>	142.3	>	20.4	>
14	>	189.8	>	19.1	>
15	>	253.1	>	21.5	>
16	>	337.5	>	27.4	>
17	>	450.0	>	36.2	>
18	>	600.1	>	48.3	>
19	>	800.2	>	64.4	>
20	>	1067.1	>	85.8	>
21	>	1423.0	>	114.5	>
22	>	1897.6	>	152.6	>

 SIMULATION MODEL No. 17

 Station No. 17
 Data List

No.	AB/2(m)	MN/2(m)	V(mV)	I(mA)	G.C.	A.R.(ohm-m)	Layer No.	R (ohm-m)	Thickness(m)
(1)	4.5	0.6	2.69E+03	700	5.21E+01	200	1	400.0	2.1
(2)	6.0	0.6	1.07E+03	700	9.33E+01	143	2	49.0	14.9
(3)	8.0	0.6	3.93E+02	700	1.67E+02	94	3	13.0	233.0
(4)	10.0	0.6	1.75E+02	700	2.61E+02	65	4	9900.0	INFINITE
(5)	14.0	0.6	7.35E+01	700	5.12E+02	54			
(6)	14.0	3.0	3.58E+02	700	9.79E+01	50			
(7)	20.0	0.6	3.16E+01	700	1.05E+03	47			
(8)	20.0	3.0	1.45E+02	700	2.05E+02	42			
(9)	27.0	3.0	7.10E+01	700	3.77E+02	38			
(10)	35.0	3.0	3.54E+01	700	6.37E+02	32			
(11)	45.0	3.0	1.55E+01	700	1.06E+03	23			
(12)	60.0	3.0	6.38E+00	700	1.88E+03	17			
(13)	80.0	3.0	3.54E+00	800	3.35E+03	15			
(14)	80.0	15.0	1.66E+01	800	6.47E+02	13			
(15)	100.0	3.0	2.36E+00	800	5.23E+03	15			
(16)	100.0	15.0	1.07E+01	800	1.02E+03	14			
(17)	140.0	15.0	5.37E+00	800	2.03E+03	14			
(18)	200.0	15.0	3.13E+00	900	4.17E+03	14			
(19)	270.0	15.0	2.12E+00	1000	7.61E+03	16			
(20)	270.0	50.0	7.93E+00	1000	2.21E+03	18			
(21)	350.0	15.0	1.30E+00	900	1.28E+04	18			
(22)	350.0	50.0	4.80E+00	900	3.77E+03	20			
(23)	450.0	50.0	3.82E+00	1000	6.28E+03	24			
(24)	600.0	50.0	2.80E+00	1000	1.12E+04	31			
(25)	800.0	50.0	2.10E+00	1000	2.00E+04	42			
(26)	1000.0	50.0	1.50E+00	900	3.13E+04	52			
(27)	1250.0	50.0	1.33E+00	1000	4.90E+04	65			
(28)	1500.0	50.0	1.09E+00	1000	7.06E+04	77			

 Calculated Values MODEL No. 17

< No.	>	< AB/2(m)	>	< A.R.(ohm-m)	>
1		4.5		196.0	
2		6.0		129.4	
3		8.0		83.1	
4		10.7		59.6	
5		14.2		49.7	
6		19.0		43.5	
7		25.3		36.8	
8		33.7		29.3	
9		45.0		22.5	
10		60.0		17.6	
11		80.0		15.1	
12		106.7		14.1	
13		142.3		14.0	
14		189.8		14.6	
15		253.1		16.2	
16		337.5		19.4	
17		450.0		24.6	
18		600.1		32.3	
19		800.2		43.0	
20		1067.1		57.4	
21		1423.0		76.6	
22		1897.6		102.0	

 SIMULATION MODEL No. 18

Layer No.	R (ohm-m)	Thickness (m)
1	14.0	1.2
2	90.0	2.5
3	19.0	80.3
4	56.0	256.0
5	22.0	INFINITE

 Calculated Values MODEL No. 18

< No. >	< AB/2(m) >	< A.R. (ohm-m) >
1	4.5	32.0
2	6.0	35.5
3	8.0	37.3
4	10.7	36.5
5	14.2	33.4
6	19.0	29.1
7	25.3	25.0
8	33.7	22.2
9	45.0	20.9
10	60.0	20.6
11	80.0	21.1
12	106.7	22.4
13	142.3	24.8
14	189.8	28.1
15	253.1	31.7
16	337.5	34.9
17	450.0	37.0
18	600.1	37.3
19	800.2	35.5
20	1067.1	32.3
21	1423.0	28.7
22	1897.6	25.8

 Data List
 Station No. 18

No.	AB/2(m)	MN/2(m)	V(mV)	I(mA)	G.C.	A.R. (ohm-m)
(1)	4.5	0.6	4.34E+02	700	5.21E+01	32
(2)	6.0	0.6	2.73E+02	700	9.33E+01	36
(3)	8.0	0.6	1.69E+02	700	1.67E+02	40
(4)	10.0	0.6	1.06E+02	700	2.61E+02	40
(5)	14.0	0.6	4.78E+01	700	5.12E+02	35
(6)	14.0	3.0	2.30E+02	700	9.79E+01	32
(7)	20.0	0.6	1.73E+01	700	1.05E+03	26
(8)	20.0	3.0	7.99E+01	700	2.05E+02	23
(9)	27.0	3.0	4.35E+01	700	3.77E+02	23
(10)	35.0	3.0	2.53E+01	700	6.37E+02	23
(11)	45.0	3.0	1.67E+01	800	1.06E+03	22
(12)	60.0	3.0	8.00E+00	800	1.88E+03	19
(13)	80.0	3.0	6.10E+00	900	3.35E+03	23
(14)	80.0	15.0	2.88E+01	900	6.47E+02	21
(15)	100.0	3.0	3.51E+00	800	5.23E+03	23
(16)	100.0	15.0	1.61E+01	800	1.02E+03	21
(17)	140.0	15.0	1.24E+01	1000	2.03E+03	25
(18)	200.0	15.0	6.22E+00	1000	4.17E+03	26
(19)	270.0	15.0	4.28E+00	1000	7.61E+03	33
(20)	270.0	50.0	1.35E+01	1000	2.21E+03	30
(21)	350.0	15.0	2.93E+00	1000	1.28E+04	38
(22)	350.0	50.0	9.01E+00	1000	3.77E+03	34
(23)	450.0	50.0	5.48E+00	1000	6.28E+03	34
(24)	600.0	50.0	3.29E+00	1000	1.12E+04	37
(25)	800.0	50.0	1.74E+00	1000	2.00E+04	35
(26)	1000.0	50.0	9.34E-01	900	3.13E+04	33
(27)	1250.0	50.0	5.98E-01	1000	4.90E+04	29
(28)	1500.0	50.0	4.24E-01	1000	7.06E+04	30

 Data List

 Station No. 19

 SIMULATION MODEL No. 19

No.	AB/2(m)	MN/2(m)	V(mV)	I(mA)	G.C.	A.R.(ohm-m)	Layer No.	R(ohm-m)	Thickness(m)
(1)	4.5	0.6	4.66E+03	700	5.21E+01	347	1	330.0	3.8
(2)	6.0	0.6	2.05E+03	700	9.33E+01	273	2	200.0	9.2
(3)	8.0	0.6	1.05E+03	700	1.67E+02	250	3	15.0	45.0
(4)	10.0	0.6	7.55E+02	700	2.61E+02	281	4	27.0	652.0
(5)	14.0	0.6	2.78E+02	700	5.12E+02	203	5	3200.0	INFINITE
(6)	14.0	3.0	1.37E+03	700	9.79E+01	192			
(7)	20.0	0.6	8.67E+01	700	1.05E+03	130			
(8)	20.0	3.0	4.33E+02	700	2.05E+02	127			
(9)	27.0	3.0	1.46E+02	700	3.77E+02	79			
(10)	35.0	3.0	5.71E+01	700	6.37E+02	52			
(11)	45.0	3.0	1.96E+01	700	1.06E+03	30			
(12)	60.0	3.0	8.40E+00	800	1.88E+03	20			
(13)	80.0	3.0	4.61E+00	800	3.35E+03	19			
(14)	80.0	15.0	2.29E+01	800	6.47E+02	19			
(15)	100.0	3.0	3.30E+00	900	5.23E+03	19			
(16)	100.0	15.0	1.58E+01	900	1.02E+03	18			
(17)	140.0	15.0	1.01E+01	1000	2.03E+03	20			
(18)	200.0	15.0	5.40E+00	1000	4.17E+03	22			
(19)	270.0	15.0	2.98E+00	1000	7.61E+03	23			
(20)	270.0	50.0	1.09E+01	1000	2.21E+03	24			
(21)	350.0	15.0	1.55E+00	800	1.28E+04	25			
(22)	350.0	50.0	5.43E+00	800	3.77E+03	26			
(23)	450.0	50.0	4.06E+00	900	6.28E+03	28			
(24)	600.0	50.0	2.39E+00	900	1.12E+04	30			
(25)	800.0	50.0	1.70E+00	1000	2.00E+04	34			
(26)	1000.0	50.0	1.29E+00	1000	3.13E+04	40			
(27)	1250.0	50.0	8.65E-01	900	4.90E+04	47			
(28)	1500.0	50.0	7.50E-01	1000	7.06E+04	53			

 Calculated Values MODEL No. 19

< No. >	< AB/2(m) >	< A.R.(ohm-m) >
1	4.5	307.5
2	6.0	288.9
3	8.0	262.2
4	10.7	228.7
5	14.2	189.8
6	19.0	145.6
7	25.3	98.9
8	33.7	58.5
9	45.0	32.5
10	60.0	21.4
11	80.0	19.0
12	106.7	19.6
13	142.3	20.9
14	189.8	22.4
15	253.1	23.9
16	337.5	25.3
17	450.0	26.9
18	600.1	29.4
19	800.2	33.5
20	1067.1	40.6
21	1423.0	51.8
22	1877.6	68.0

 SIMULATION MODEL No. 20

 Data List
 Station No. 20

No.	AB/2(m)	MN/2(m)	V(mv)	I(mA)	G.C.	A.R. (ohm-m)	Layer No.	R (ohm-m)	Thickness (m)
(1)	4.5	0.6	2.36E+03	1000	5.21E+01	123	1	120.0	18.0
(2)	6.0	0.6	1.34E+03	1000	9.33E+01	125	2	600.0	5.0
(3)	8.0	0.6	7.26E+02	1000	1.67E+02	121	3	370.0	467.0
(4)	10.0	0.6	4.83E+02	1000	2.61E+02	126	4	11.0	INFINITE
(5)	14.0	0.6	2.50E+02	1000	5.12E+02	128			
(6)	14.0	3.0	1.30E+03	1000	9.79E+01	127			
(7)	20.0	0.6	1.28E+02	1000	1.05E+03	134			
(8)	20.0	3.0	6.39E+02	1000	2.05E+02	131			
(9)	27.0	3.0	4.20E+02	1000	3.77E+02	158			
(10)	35.0	3.0	3.00E+02	1000	6.37E+02	191			
(11)	45.0	3.0	2.12E+02	1000	1.06E+03	224			
(12)	60.0	3.0	1.35E+02	1000	1.88E+03	254			
(13)	80.0	3.0	8.14E+01	1000	3.35E+03	272			
(14)	80.0	15.0	3.67E+02	1000	6.47E+02	237			
(15)	100.0	3.0	5.47E+01	1000	5.23E+03	286			
(16)	100.0	15.0	2.44E+02	1000	1.02E+03	250			
(17)	140.0	15.0	1.41E+02	1000	2.03E+03	286			
(18)	200.0	15.0	7.39E+01	1000	4.17E+03	308			
(19)	270.0	15.0	4.09E+01	1000	7.61E+03	311			
(20)	270.0	50.0	1.55E+02	1000	2.21E+03	343			
(21)	350.0	15.0	2.56E+01	1000	1.28E+04	328			
(22)	350.0	50.0	8.11E+01	1000	3.77E+03	306			
(23)	450.0	50.0	4.91E+01	1000	6.28E+03	309			
(24)	600.0	50.0	2.59E+01	900	1.12E+04	323			
(25)	800.0	50.0	9.52E+00	900	2.00E+04	212			
(26)	800.0	50.0	8.47E+00	800	2.00E+04	212			
(27)	1000.0	50.0	5.99E+00	1000	3.13E+04	188			
(28)	1250.0	50.0	2.83E+00	900	4.90E+04	154			
(29)	1500.0	50.0	1.03E+00	900	7.06E+04	81			
(30)	1500.0	50.0	9.88E-01	900	7.06E+04	78			

 Calculated Values MODEL No. 20

< No.	>	< AB/2(m)	>	< A.R. (ohm-m)	>
1		4.5		120.3	
2		6.0		120.7	
3		8.0		121.6	
4		10.7		123.6	
5		14.2		127.8	
6		19.0		136.0	
7		25.3		150.1	
8		33.7		171.2	
9		45.0		198.1	
10		60.0		227.9	
11		80.0		257.6	
12		106.7		284.7	
13		142.3		307.5	
14		189.8		324.6	
15		253.1		334.4	
16		337.5		334.5	
17		450.0		321.1	
18		600.1		288.6	
19		800.2		233.3	
20		1067.1		161.2	
21		1423.0		91.1	
22		1897.6		42.3	

 SIMULATION MODEL No. 21

 Data List
 Station No. 21

No.	AB/2(m)	FN/2(m)	V(mV)	I(mA)	G.C.	A.R.(ohm-m)	Layer No.	R (ohm-m)	Thickness(m)
(1)	4.5	0.6	2.78E+03	700	5.21E+01	207	1	280.0	3.6
(2)	6.0	0.6	1.30E+03	700	9.33E+01	173	2	10.2	21.4
(3)	8.0	0.6	4.78E+02	700	1.67E+02	114	3	34.0	85.0
(4)	10.0	0.6	1.92E+02	700	2.61E+02	72	4	5.7	200.0
(5)	14.0	0.6	3.19E+01	600	3.12E+02	27	5	1200.0	INFINITE
(6)	14.0	3.0	1.78E+02	600	9.79E+01	29			
(7)	20.0	0.6	8.45E+00	600	1.05E+03	15			
(8)	20.0	3.0	4.41E+01	600	2.05E+02	15			
(9)	27.0	3.0	2.37E+01	700	3.77E+02	13			
(10)	35.0	3.0	1.49E+01	700	6.37E+02	14			
(11)	45.0	3.0	9.91E+00	700	1.06E+03	15			
(12)	60.0	3.0	5.48E+00	600	1.88E+03	17			
(13)	80.0	3.0	4.05E+00	700	3.35E+03	19			
(14)	80.0	15.0	2.00E+01	700	6.47E+02	18			
(15)	100.0	3.0	2.70E+00	700	5.23E+03	20			
(16)	100.0	15.0	1.32E+01	700	1.02E+03	19			
(17)	140.0	15.0	1.07E+01	1000	2.03E+03	22			
(18)	200.0	15.0	4.90E+00	1000	4.17E+03	20			
(19)	270.0	15.0	2.47E+00	1000	7.61E+03	19			
(20)	270.0	50.0	8.12E+00	1000	2.21E+03	18			
(21)	350.0	15.0	1.22E+00	900	1.28E+04	17			
(22)	350.0	50.0	3.89E+00	900	3.77E+03	16			
(23)	450.0	50.0	2.44E+00	1000	6.28E+03	15			
(24)	600.0	50.0	1.45E+00	1000	1.12E+04	16			
(25)	800.0	50.0	1.00E+00	1000	2.00E+04	20			
(26)	1000.0	50.0	7.89E-01	1000	3.13E+04	25			
(27)	1250.0	50.0	6.25E-01	1000	4.90E+04	31			
(28)	1500.0	50.0	5.10E-01	1000	7.06E+04	36			

 Calculated Values MODEL No. 21

< No. >	< AB/2(m) >	< A.R.(ohm-m) >
1	4.5	212.6
2	6.0	164.6
3	8.0	108.1
4	10.7	58.4
5	14.2	27.6
6	19.0	15.2
7	25.3	12.7
8	33.7	13.4
9	45.0	14.9
10	60.0	17.1
11	80.0	19.3
12	106.7	20.9
13	142.3	21.5
14	187.8	20.7
15	253.1	18.6
16	337.5	16.1
17	450.0	14.8
18	600.1	16.0
19	800.2	19.9
20	1067.1	26.1
21	1423.0	34.7
22	1897.6	45.9

 SIMULATION MODEL No. 22

 SIMULATION MODEL No. 22

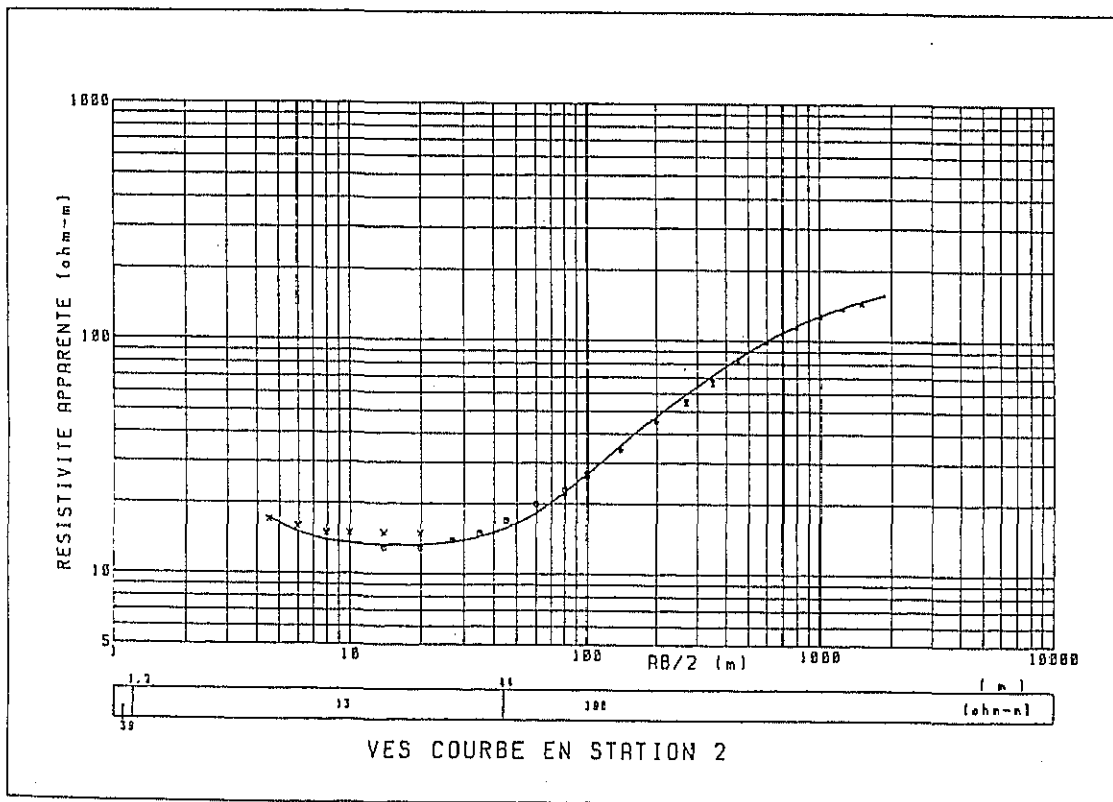
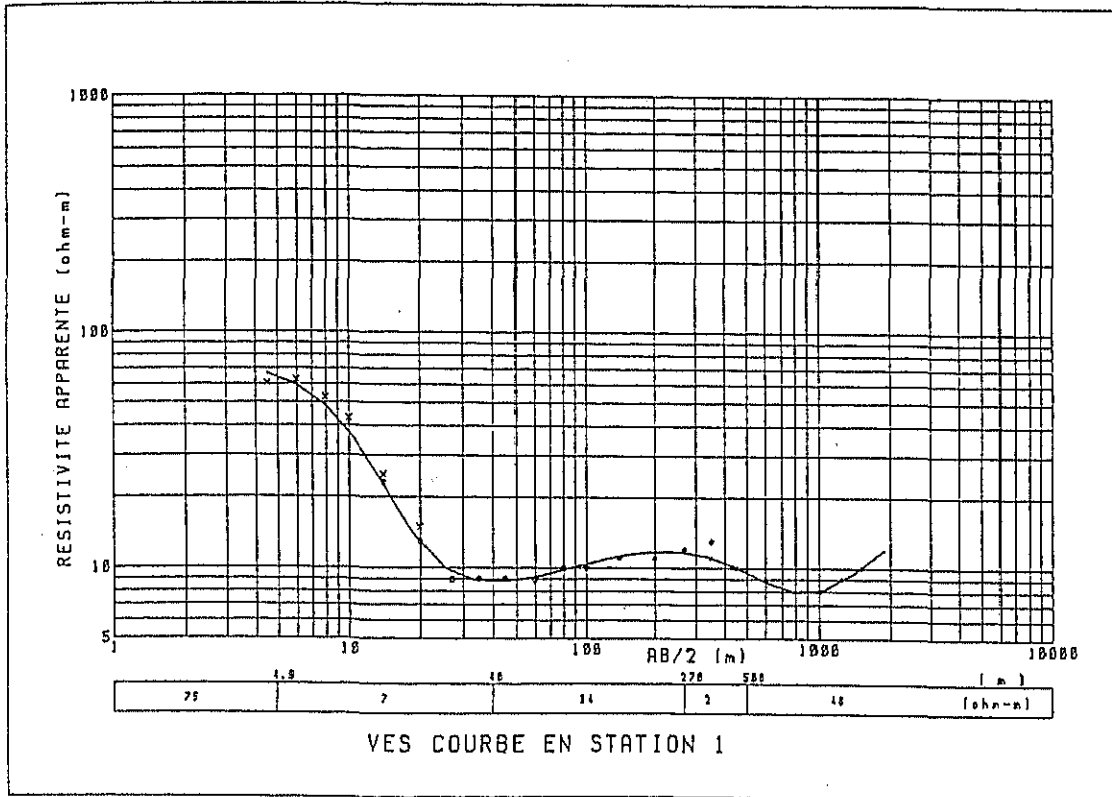
 Data List

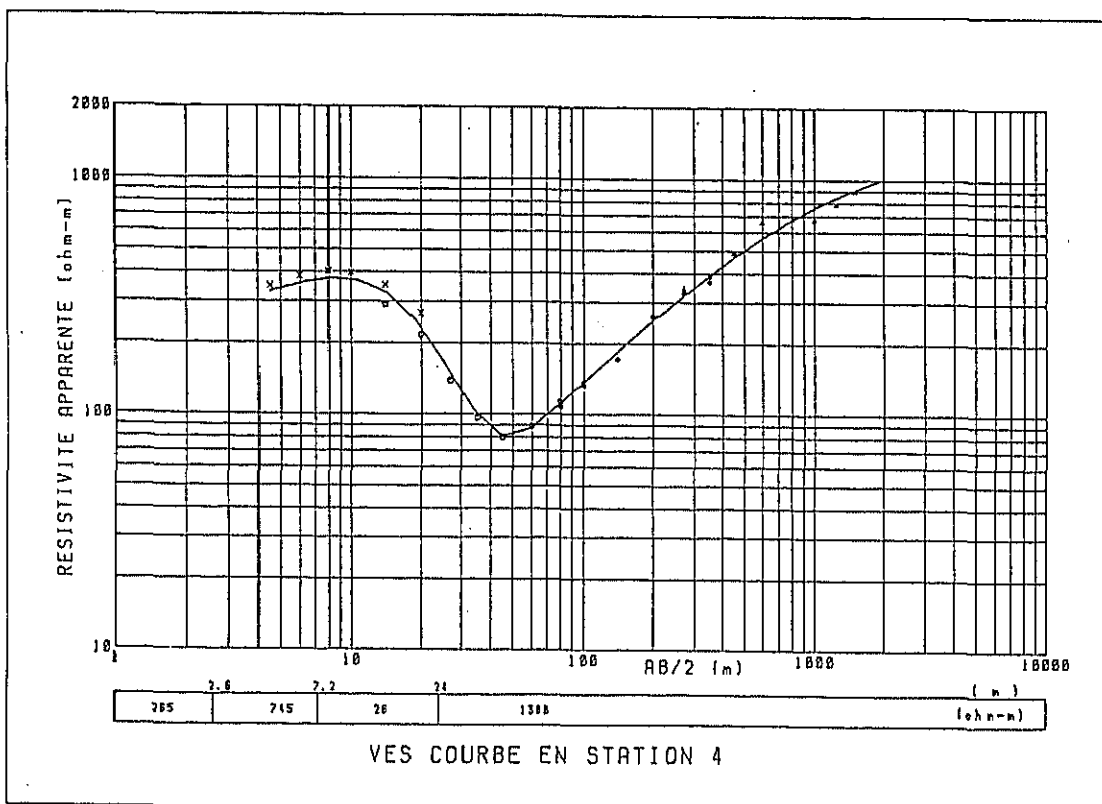
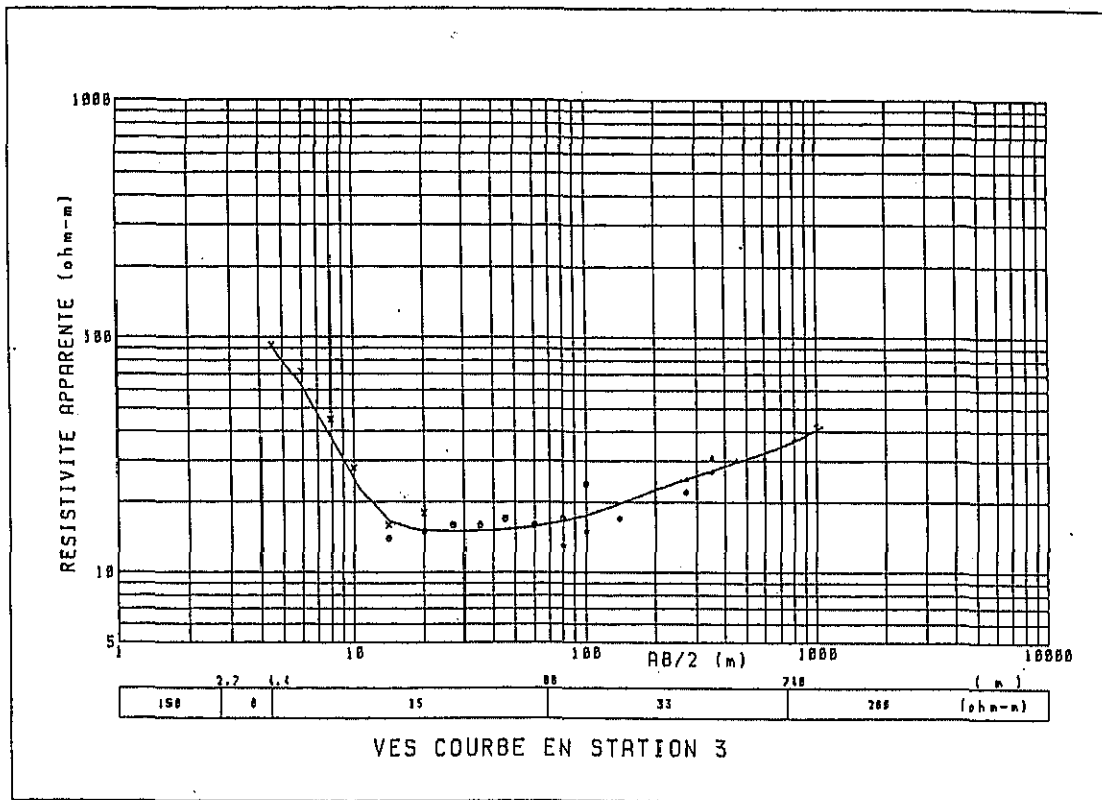
 Station No. 22

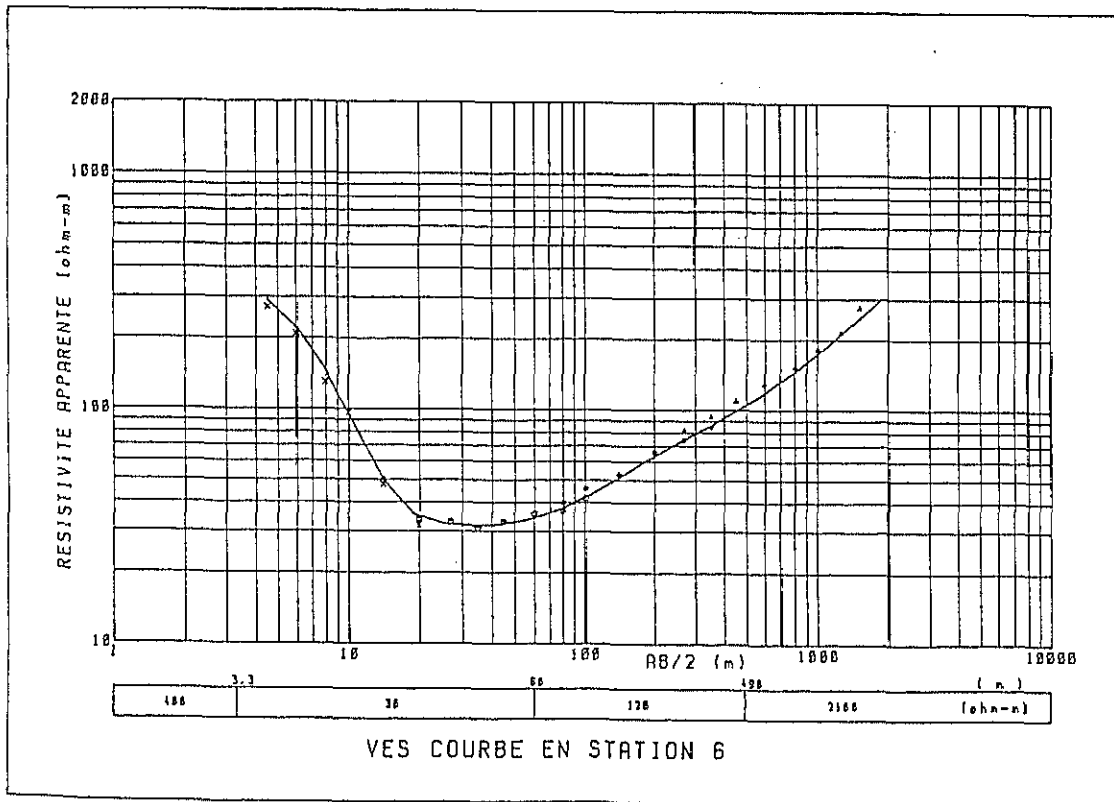
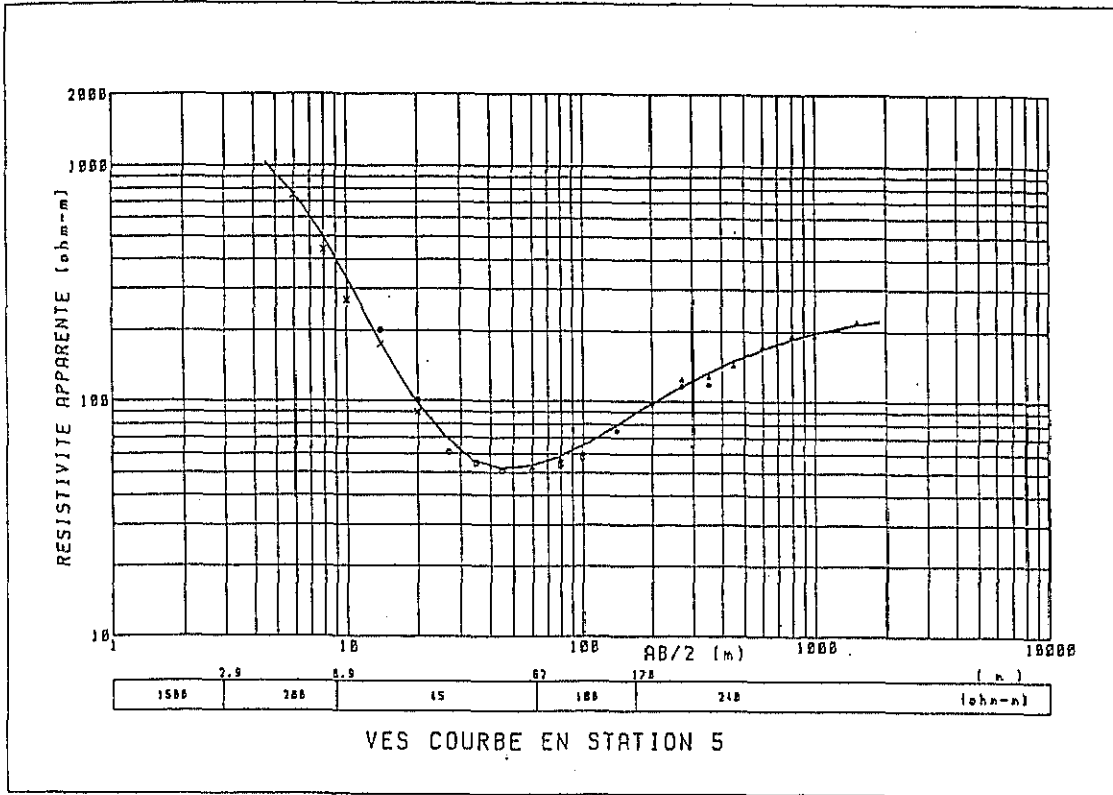
No.	AB/2(m)	MN/2(m)	V(mV)	I(mA)	G.C.	A.R. (ohm-m)	Layer No.	R (ohm-m)	Thickness(m)
(1)	4.5	0.6	9.06E+02	700	5.21E+01	67	1	120.0	2.4
(2)	6.0	0.6	3.38E+02	700	9.33E+01	45	2	6.9	4.5
(3)	8.0	0.6	1.24E+02	800	1.67E+02	26	3	15.0	37.1
(4)	10.0	0.6	5.04E+01	800	2.61E+02	16	4	22.0	446.0
(5)	14.0	0.6	2.03E+01	800	5.12E+02	13	5	50.0	INFINITE
(6)	14.0	3.0	9.79E+01	800	9.79E+01	12			
(7)	20.0	0.6	1.09E+01	800	1.05E+03	14			
(8)	20.0	3.0	5.14E+01	800	2.05E+02	13			
(9)	27.0	3.0	3.14E+02	800	3.77E+02	15			
(10)	35.0	3.0	1.76E+01	800	6.37E+02	14			
(11)	45.0	3.0	1.15E+01	800	1.06E+03	15			
(12)	60.0	3.0	7.60E+00	900	1.88E+03	16			
(13)	80.0	3.0	4.90E+00	1000	3.35E+03	16			
(14)	80.0	15.0	2.17E+01	1000	6.47E+02	14			
(15)	100.0	3.0	3.35E+00	1000	5.23E+03	18			
(16)	100.0	15.0	1.46E+01	1000	1.02E+03	15			
(17)	140.0	15.0	8.51E+00	1000	2.03E+03	17			
(18)	200.0	15.0	4.32E+00	1000	4.17E+03	18			
(19)	270.0	15.0	2.49E+00	1000	7.61E+03	19			
(20)	270.0	50.0	9.54E+00	1000	2.21E+03	21			
(21)	350.0	15.0	1.52E+00	1000	1.28E+04	19			
(22)	350.0	50.0	5.77E+00	1000	3.77E+03	22			
(23)	450.0	50.0	3.41E+00	1000	6.28E+03	21			
(24)	600.0	50.0	2.07E+00	1000	1.12E+04	23			
(25)	800.0	50.0	1.32E+00	1000	2.00E+04	26			
(26)	1000.0	50.0	8.87E-01	1000	3.13E+04	28			
(27)	1250.0	50.0	5.00E-01	800	4.90E+04	31			
(28)	1500.0	50.0	4.71E-01	1000	7.06E+04	33			

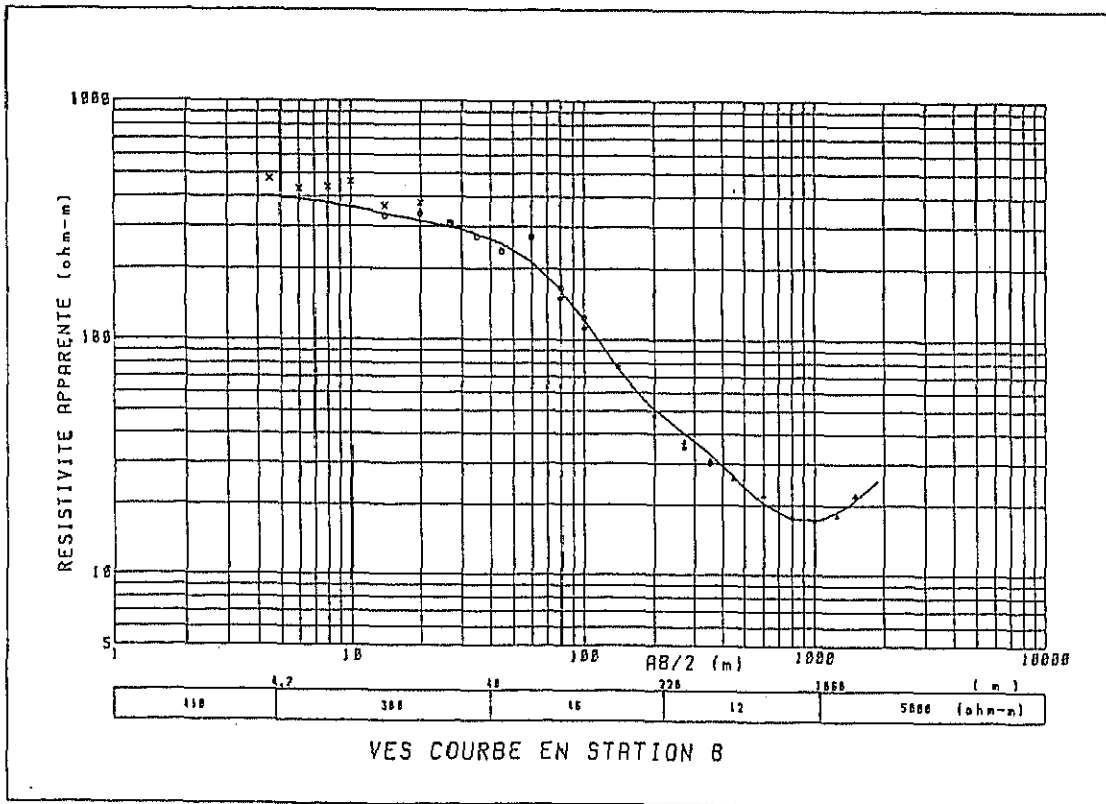
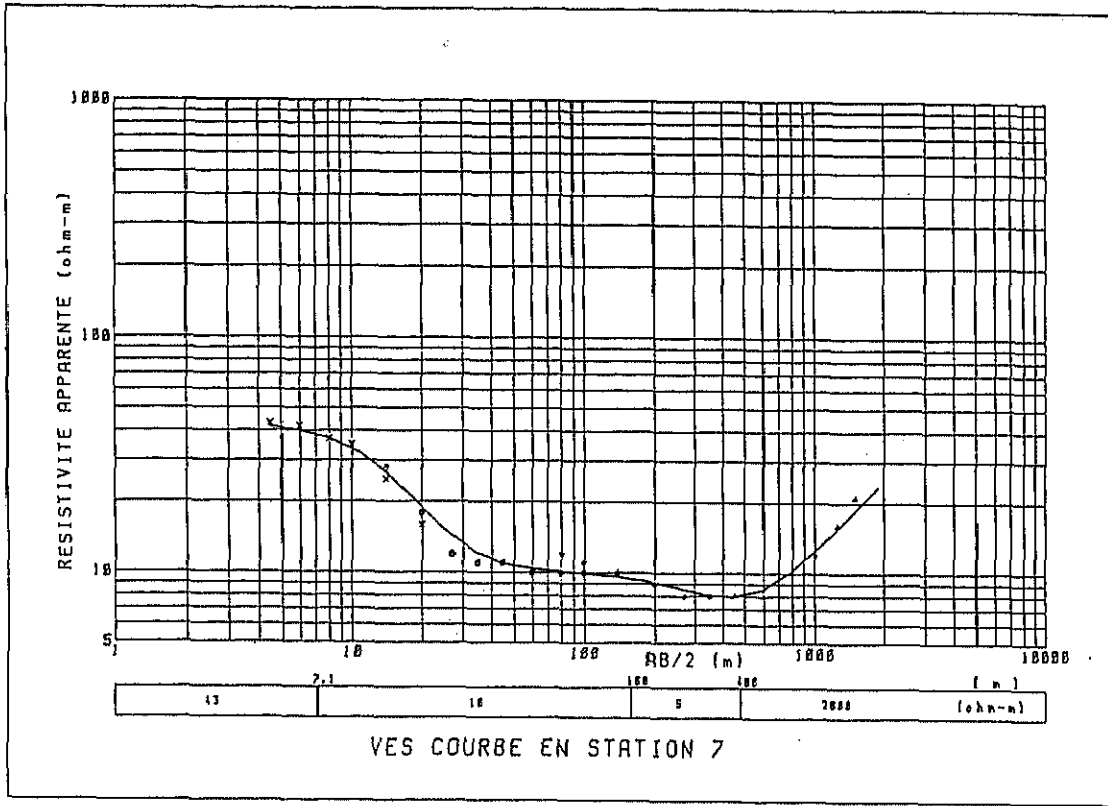
 Calculated Values MODEL No. 22

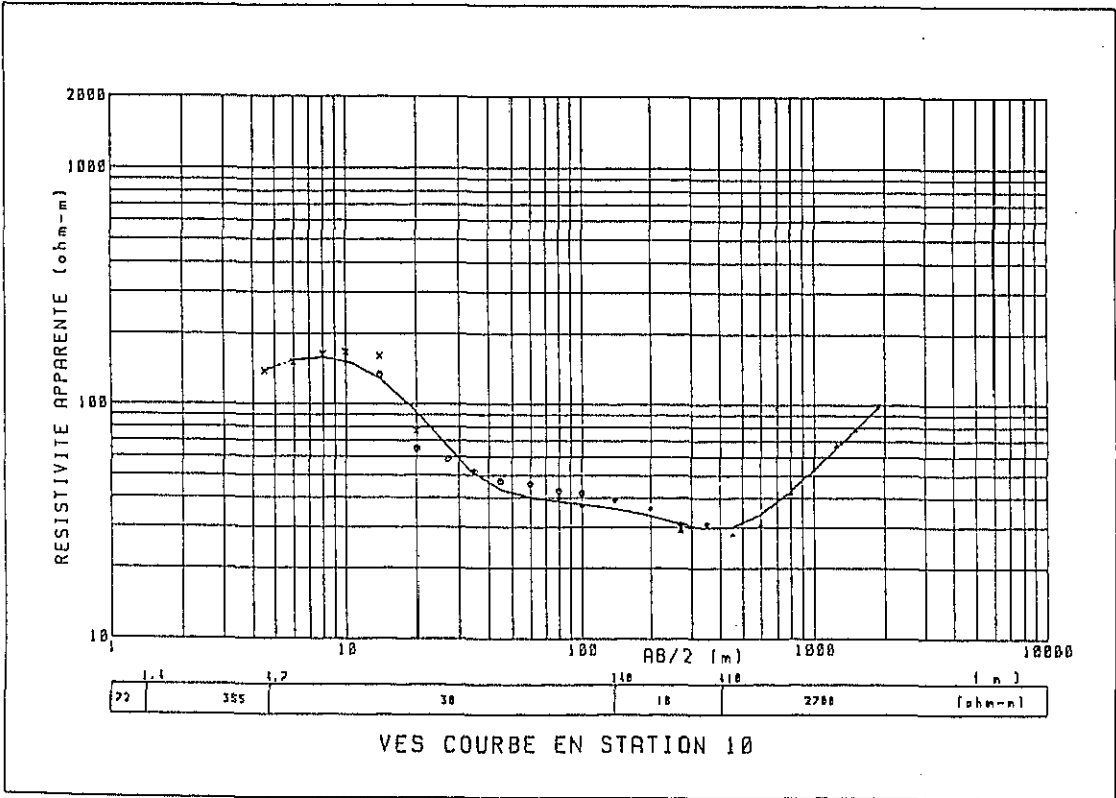
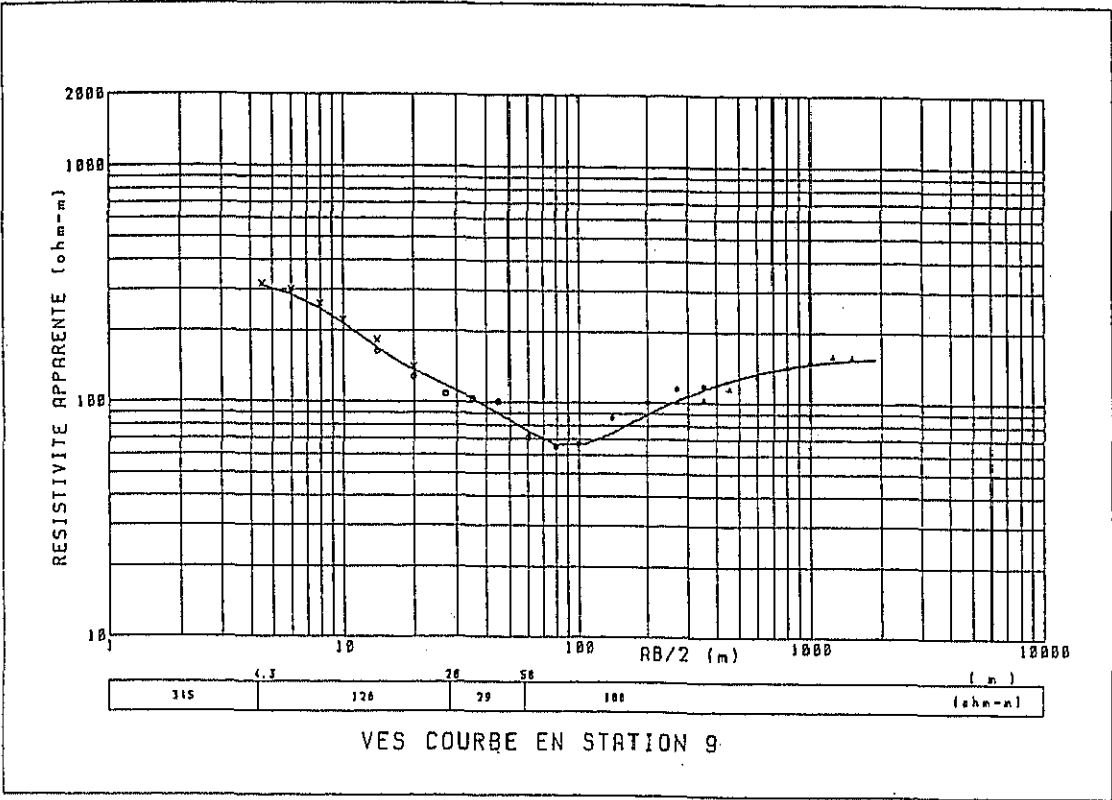
< No. >	< AB/2(m) >	< A.R. (ohm-m) >
1	4.5	63.1
2	6.0	40.2
3	8.0	22.8
4	10.7	13.9
5	14.2	11.6
6	19.0	11.9
7	25.3	12.7
8	33.7	13.5
9	45.0	14.3
10	60.0	15.2
11	80.0	16.2
12	106.7	17.3
13	142.3	18.4
14	189.8	19.5
15	253.1	20.5
16	337.5	21.4
17	450.0	22.5
18	600.1	23.9
19	800.2	26.1
20	1067.1	29.0
21	1423.0	32.5
22	1897.6	36.2

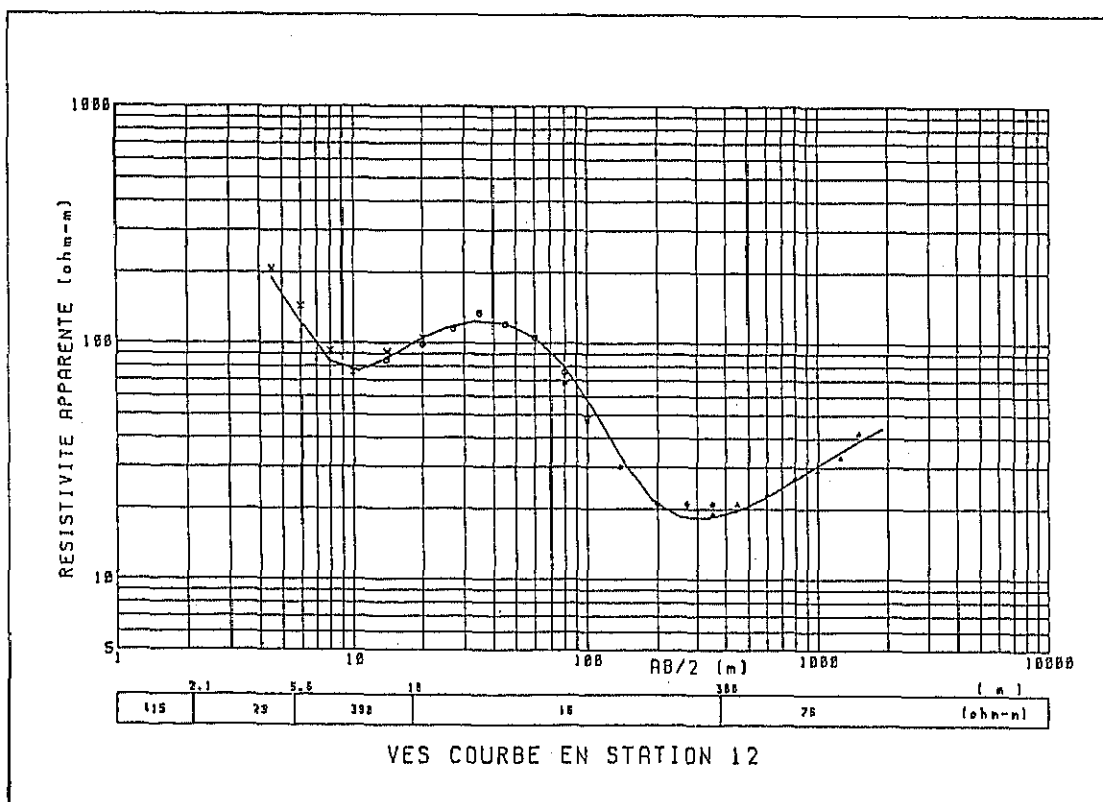
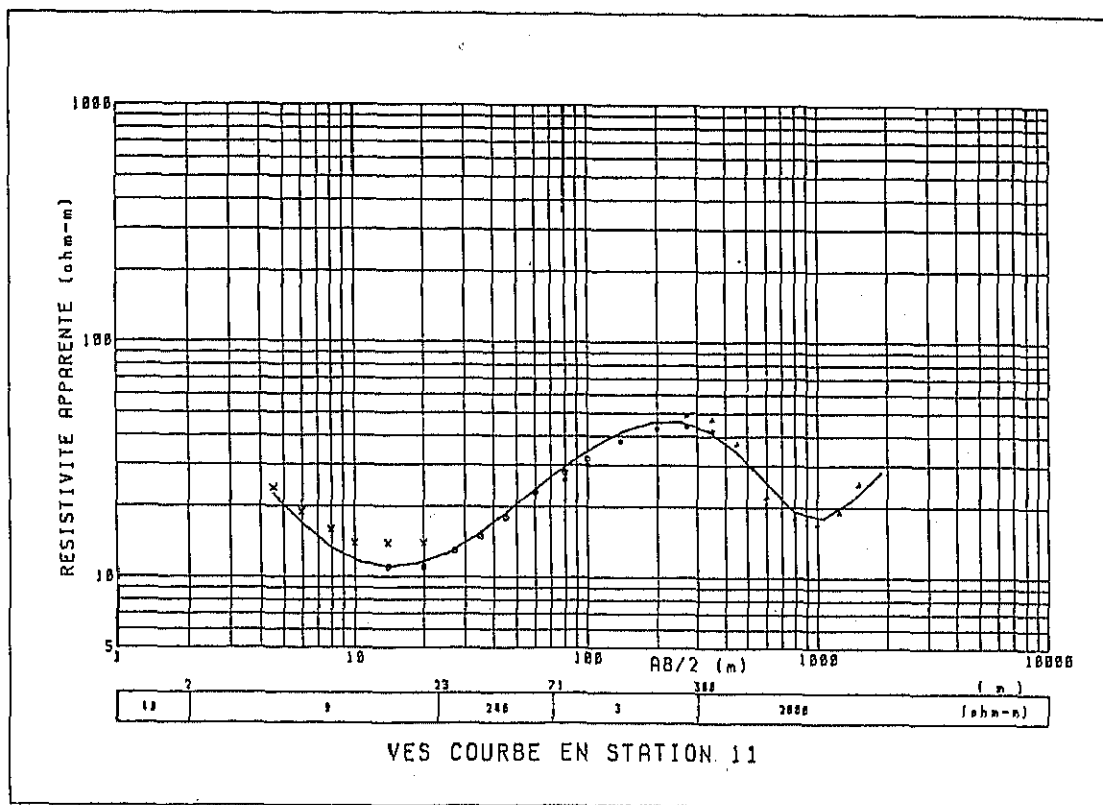


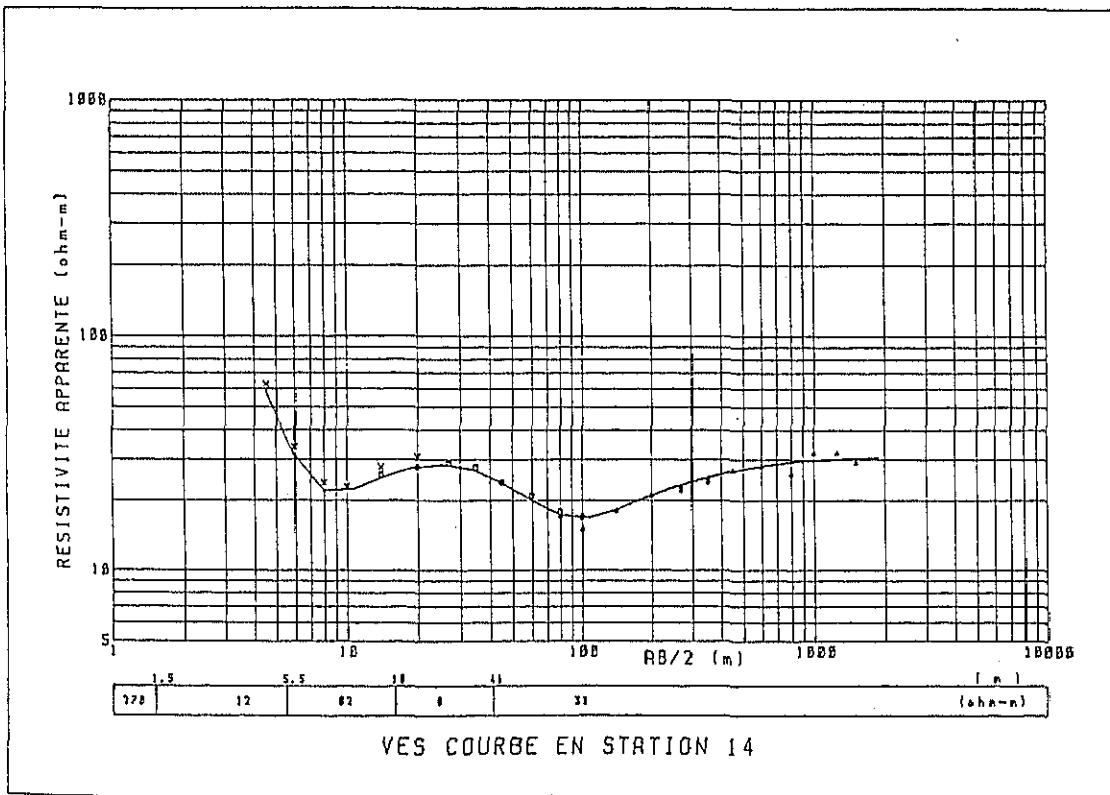
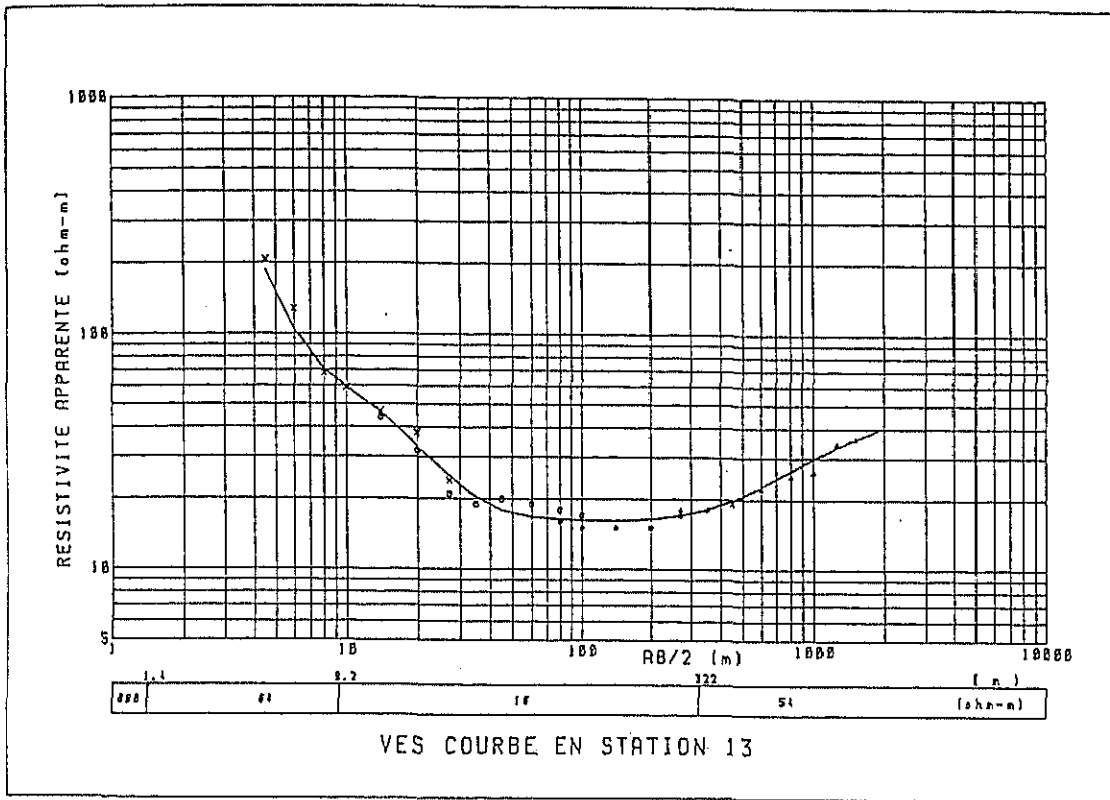


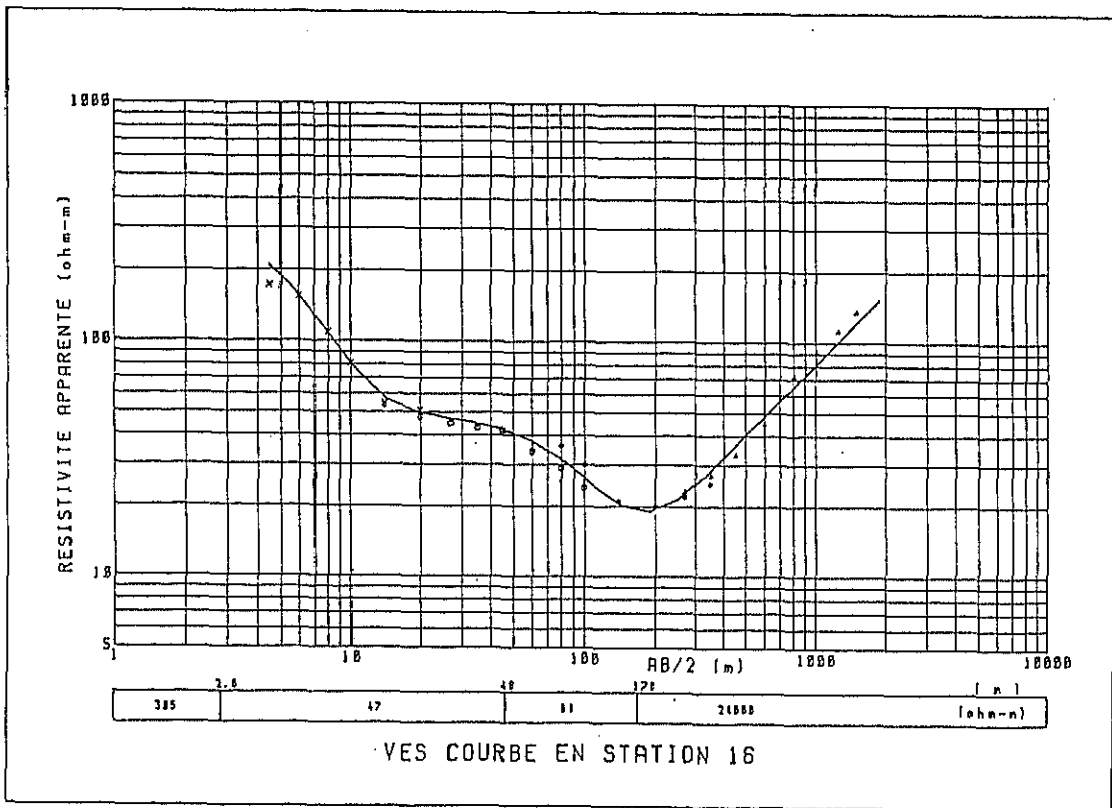
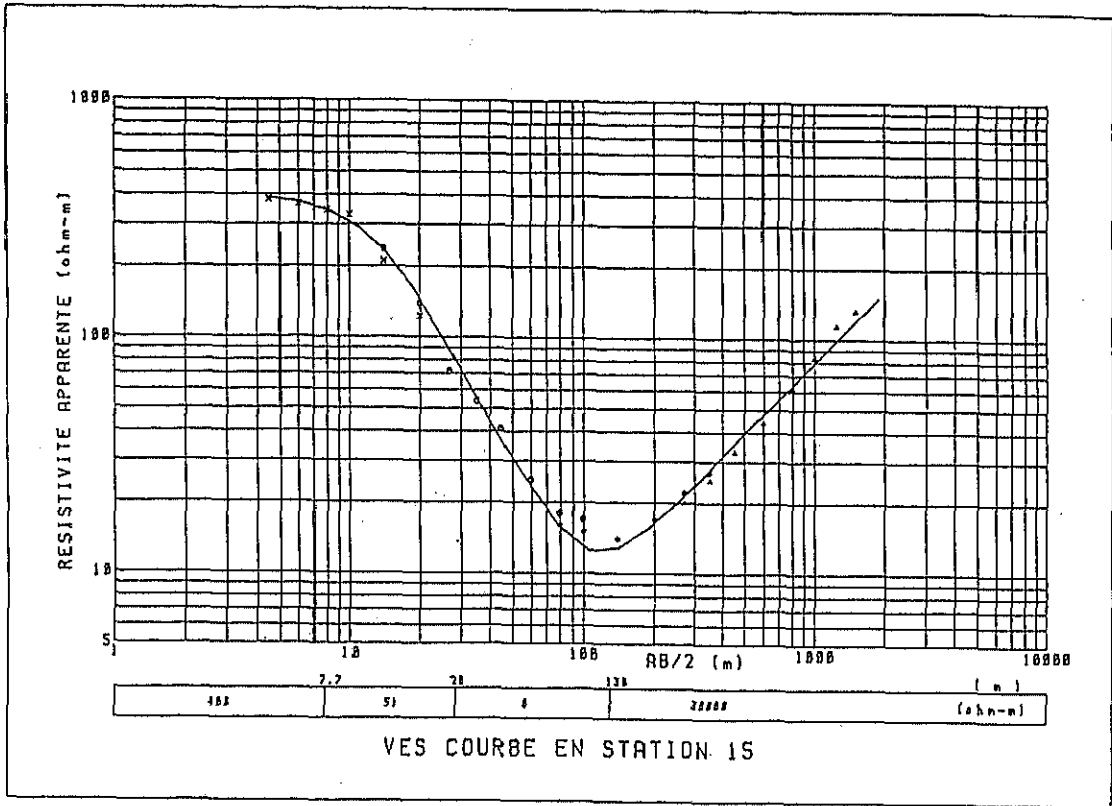


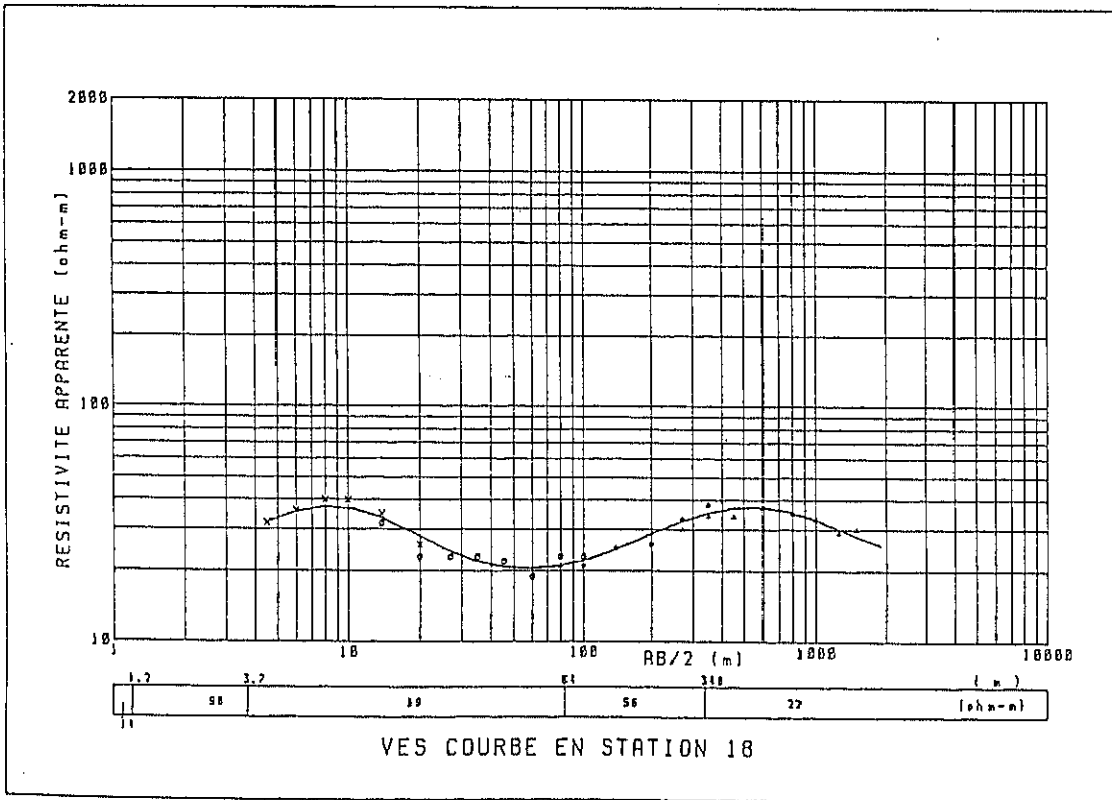
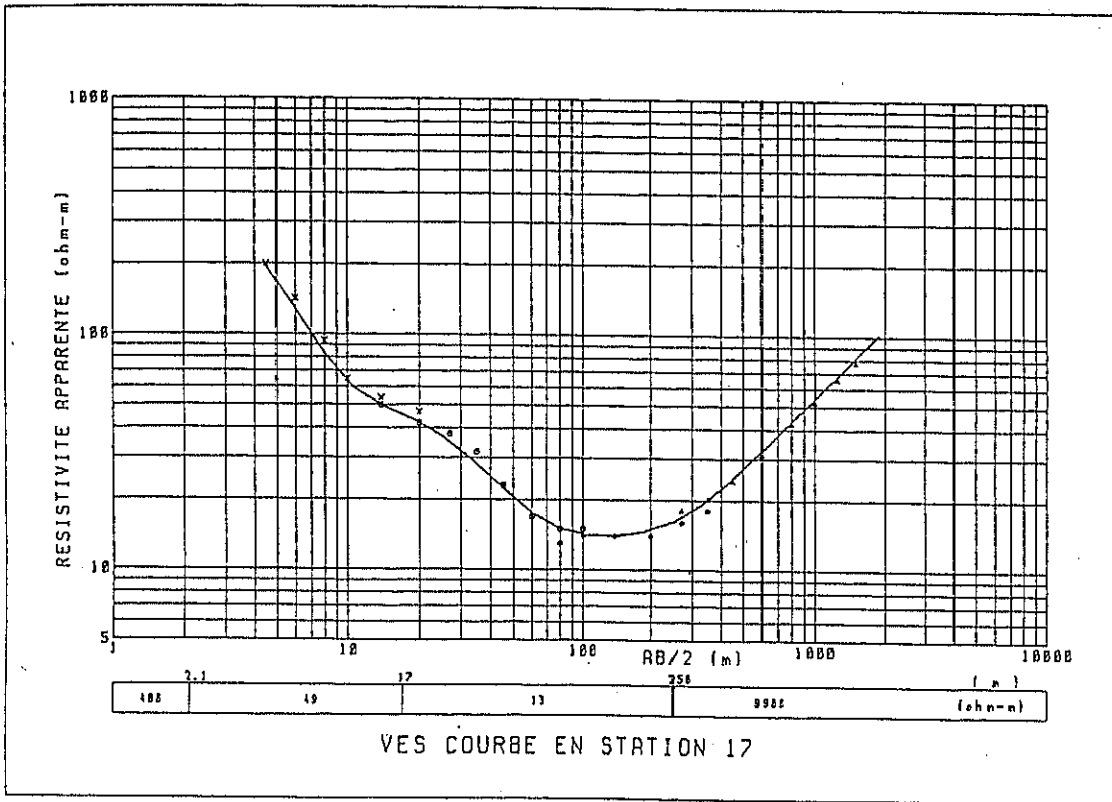


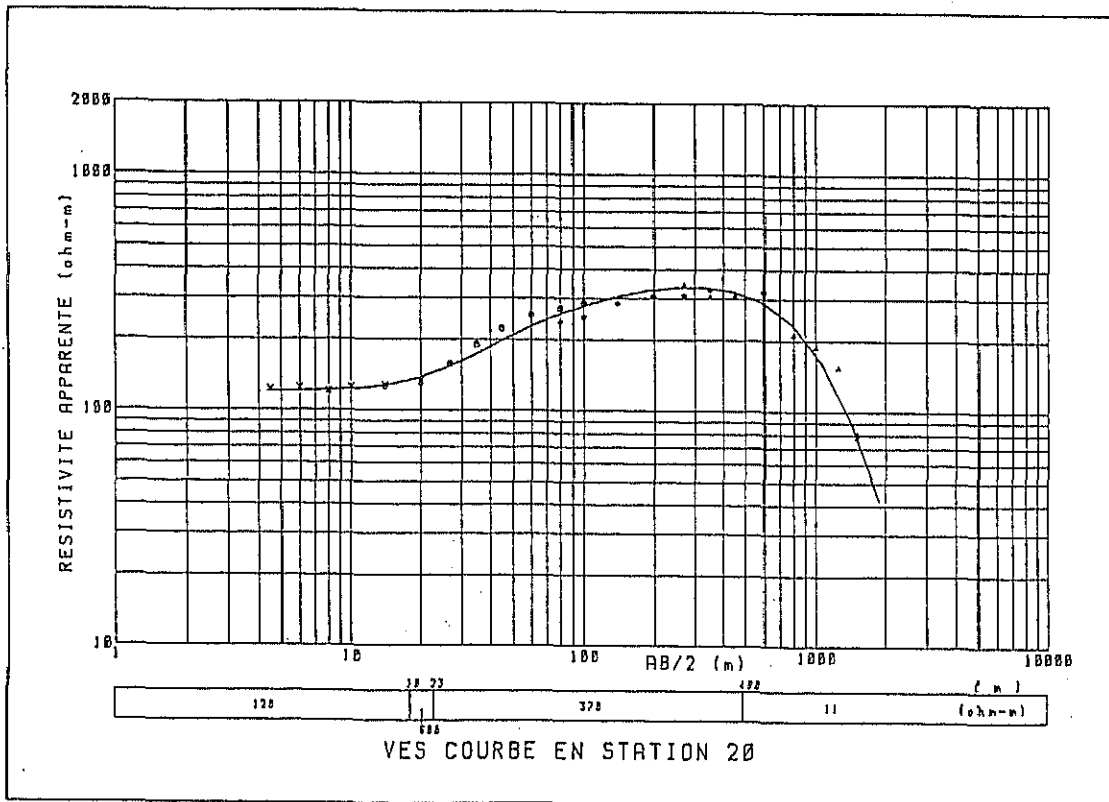
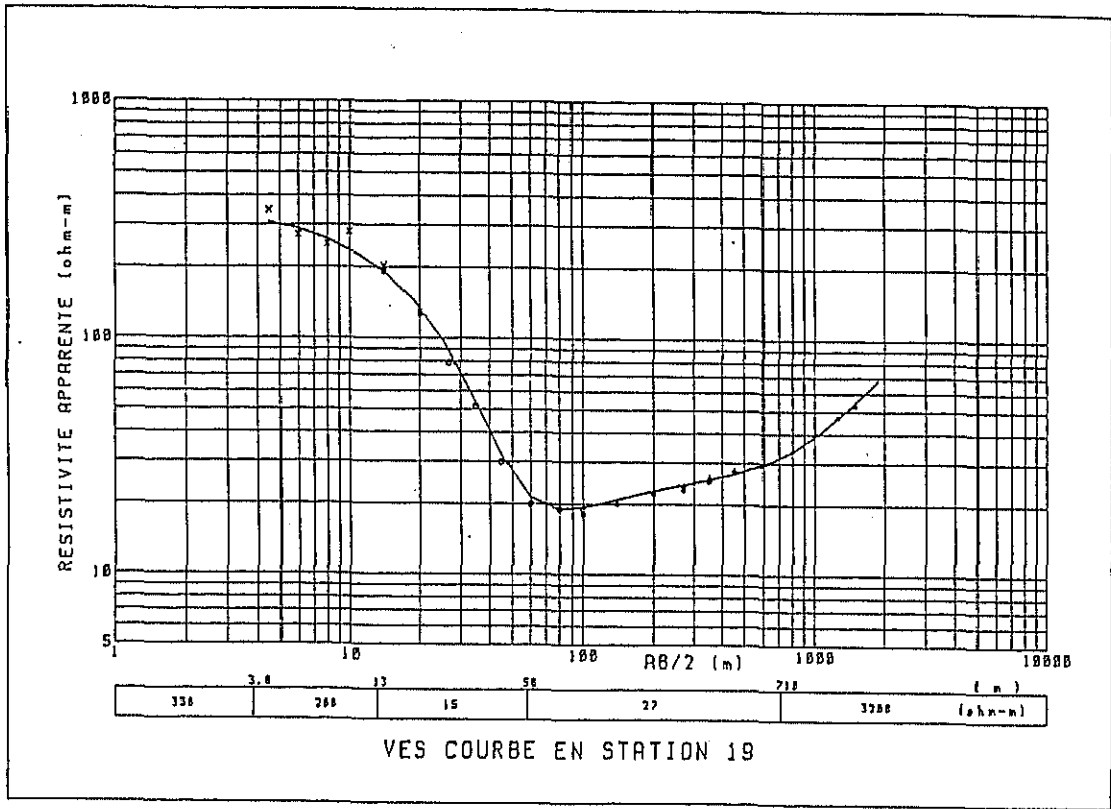


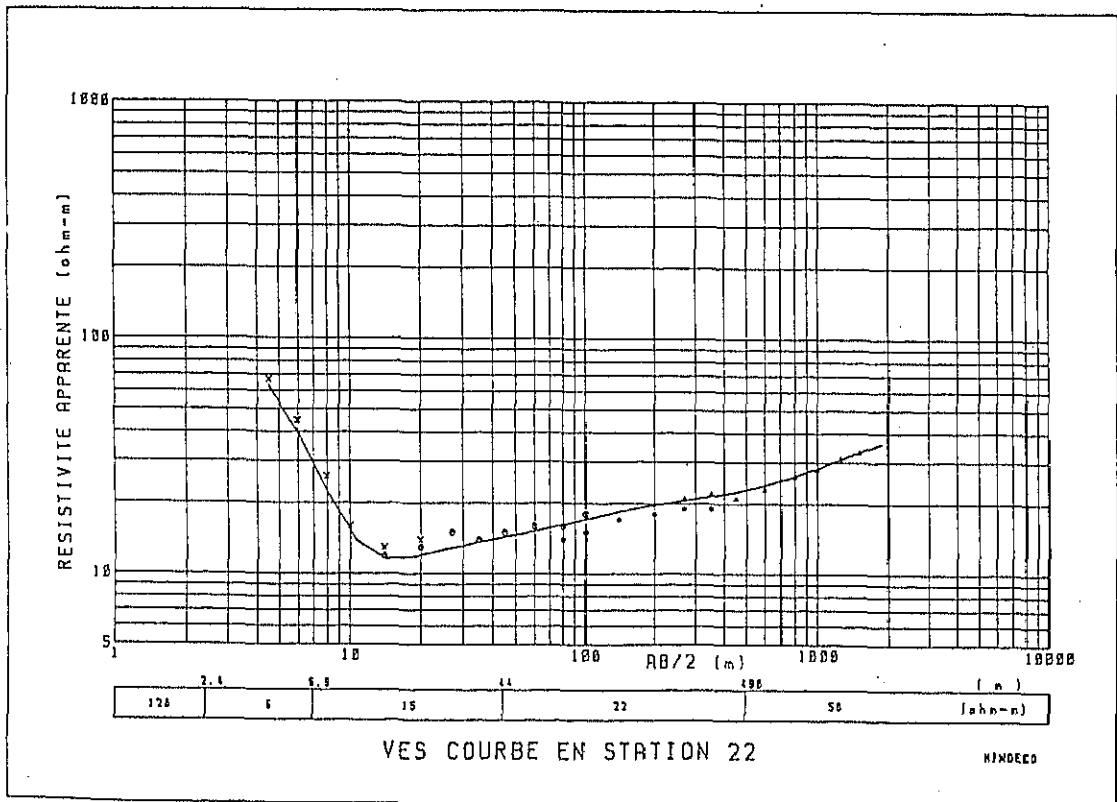
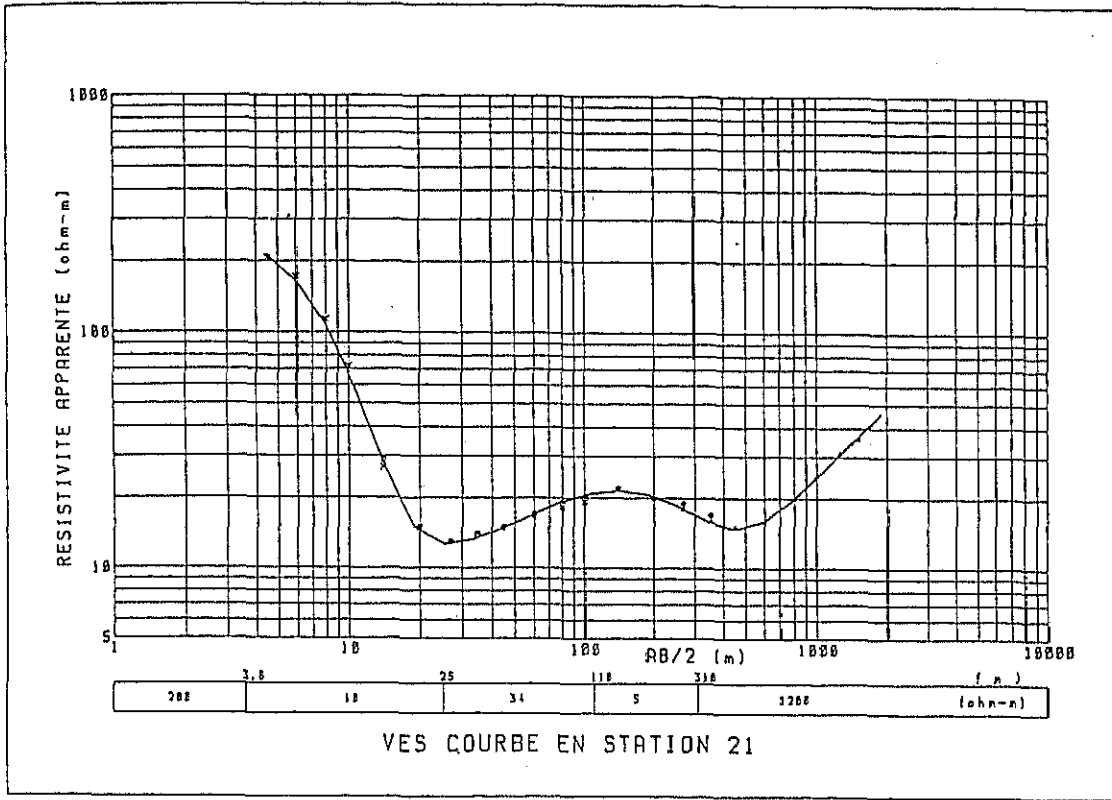












SUPERFICIES et PRODUCTIONS
DES PRINCIPALES CULTURES (1981/82 - 1983/84)
MORAC, OUJDA

Espèces	Maroc			Oujda		
	Superficies 1.000 ha	Rendements kg/ha	Productions t	Superficies 1.000 hg	Rendements kg/ha	Productions t
Blé Dur	1.171,7	753	881,967	27,9	379	10,580
Blé Tendre	667,4	1.162	775,710	5,2	794	4,130
Orge	2.107,8	785	1.655,347	95,1	531	50,497
Maïs	406,2	631	256,403	-	-	-
Sorgho	35,6	722	25,697	-	-	-
Alpiste	7,7	701	5,400	-	-	-
Aovine	57,3	946	54.203	7,6	354	2,690
Riz	1,5	2.702	4,053	-	-	-
Autres cereales	31,7	890	28,213	-	-	-
Fèves	157,3	770	121,070	0,3	256	77
Petits-pois	46,3	515	23,867	0,2	300	300
Lentilles	61,7	442	27,277	0,5	190	95
Pois-chiches	61,8	730	45,130	-	-	-
Orobe	24,3	514	12,490	-	-	-
Autres Legumineuses	31,7	662	20,978	0,5	260	130

Source: Enquete Sur l'Agricole principales productions végétales campagne (1981/82 - 1983/84)

.... /

(suite)

Espèces	Maroc			Oujda		
	Superficies 1.000 ha	Rendements kg/ha	Productions t	Superficies 1.000 hg	Rendements kg/ha	Productions t
Betteraw	58,8	42,116	2.476,450	3,5	6,906	24,169
Canne à Sucre	9,4	71,628	673,299	0,8	44,125	35,300
Côtton	10,2	1,812	18,483	-	-	-
Tournesol	20,6	665	13,693	-	-	-
Arachide	28,3	1,269	35,903	3,1	-	-
Fourragers	110,1	-	-	-	-	-
Tomato	13,1	37,972	497,430	-	-	-
Pomme de terre	33,4	16,379	547,050	-	-	-
Oignon	18,5	14,111	261,055	-	-	-
Autres Maraichères	69,5	13,546	941,420	-	-	-
Olivier	273,2	1,390	379,825	6,2	-	-
Amandier	33,6	1,045	35,110	3,7	-	-
Agrumes	69,3	70,261	1.013,865	7,6	-	-
Vigne	57,0	2,660	151,640	0,2	-	-
Dattier	21,8	1,616	35,220	-	-	-
Autres Fruits	53,5	-	-	3,2	-	-
Jachere	2.235,8	-	-	163,5	-	-

SUPERFICIES et PRODUCTIONS
DES PRINCIPALES CULTURES; Cercle (1981/82-1983/84)

Espèces	Taforait (34-01)						Oued Isly (34-02)						Taourirt (34-03)					
	S	R	P	S	R	P	S	R	P	S	R	P	S	R	P			
	ha	kg	t	ha	kg	t	ha	kg	t	ha	kg	t	ha	kg	t			
Blé Dur	5.767	113	653	9.363	279	2.610	7.707	639	1.730	7.707	639	1.730	5.767	113	653			
Blé Tendre	2.900	193	560	3.388	383	1.297	2.465	306	753	2.465	306	753	2.900	193	560			
Orge	11.483	115	1.323	36.982	263	9.713	19.623	182	3.580	19.623	182	3.580	11.483	115	1.323			
Avoine	933	114	106	6.850	246	1.687	-	-	-	-	-	-	933	114	106			
Fève	400	58	23	70	48	3	90	2.000	180	90	2.000	180	400	58	23			
Lentille	367	109	40	48	69	3	-	-	-	-	-	-	367	109	40			
Luzerne en vert	67	1.970	132	897	67.789	60.807	1.730	44.428	76.860	1.730	44.428	76.860	67	1.970	132			
Mélange F.	131	5.470	716	1.245	31.989	39.827	-	-	-	-	-	-	131	5.470	716			
Pomme de Terre	17	8.039	136	88	20.492	1.803	24	8.889	213	24	8.889	213	17	8.039	136			
Tomate	12	13.333	160	123	21.626	2.660	51	15.294	780	51	15.294	780	12	13.333	160			
Oliviers	551	1.917	1.056	843	1.301	1.097	1.093	12.763	13.950	1.093	12.763	13.950	551	1.917	1.056			
Amandiers	1.031	455	470	1.080	565	610	75	178	13	75	178	13	1.031	455	470			
Abricotiers	10	5.330	53	61	4.262	260	543	10.086	5.477	543	10.086	5.477	10	5.330	53			

Source: DPA/OUJDA S.M.V.A.

S: Superficies
R: Rendements
P: Productions

...../.....

(suite)

Espèces	Ain Beni Mathar (34-05)						El Aïoun (34-06)						Total					
	S	R	P	R	S	P	S	R	P	R	S	P	S	R	P			
	ha	kg	t	kg	ha	t	ha	kg	t	kg	ha	t	kg	ha	t			
Ble Dur	852	559	477	162	4.688	760	23.377	267	6.230									
Ble Tendre	340	451	153	167	2.799	467	11.892	272	3.230									
Orge	16.038	53	857	89	19.523	1.733	103.649	166	17.206									
Avoine	298	95	28	-	196	-	8.277	220	1.821									
Fève	-	-	-	519	45	23	605	379	229									
Lentille	-	-	-	-	50	-	465	92	43									
Luzerne en vert	611	45.876	28.030	59.970	445	26.687	3.750	51.338	192.516									
Mélange F.	-	-	-	476	42	20	1.418	28.606	40.563									
Pomme de Terre	14	16.905	237	12.767	53	677	196	15.643	3.066									
Tomate	22	17.879	393	22.906	78	1.787	286	20.209	5.789									
Oliviers	72	32.130	2.313	2.198	766	1.683	3.325	6.045	20.099									
Amandiers	15	377	6	191	560	107	2.761	437	1.206									
Abricotiers	-	-	-	833	60	50	674	8.665	5.840									

(1/2) PROJET DE REHABILITATION DE LA PETITE ET MOYENNE HYDRAULIQUE
INVENTAIRE DES PERIMETRES
ETAT RECAPITULATIF

No d'Ordre	Nom du périmètre	Localisation		Coordonnées		Superficie irriguée			Origine	Observations
		Cercle	Commune rurale	X	Y	Pérenne	Saisonnnière	Crue		
1	Sidi Yahya RST	d'OUJDA	Sidi Yahya	822 500	455 000	630	-	-	Puits	Irrigation par pompage.
2	Sidi Moussa	"	Naima	805 500	445 000	389,69	-	-	Oued	
3	Oued Isly	"	"	805 000	445 000	-	2 500	-	Oued	
4	Mestferki	"	Mestferki	791 000	435 000	37	-	-	Sourcee	
5	Tixi ou Zameur	"	"	776 000	475 000	20	-	-	Sourcee	
6	Lekkara	"	"	800 000	445 000	251,25	-	-	Oued	
7	Lanna	"	Déni Drar	800 600	480 500	50	-	-	Sourcee	
8	Sefrou	"	Ain Sfa	798 800	470 000	100	50	-	Sourcee	
9	Oulad Yahya	BXKAME	Rislane	768 000	470 000	50	-	-	Sourcee	
10	Ain Beni Mathar	JERADA	A.B. Mathar	808 811	383 390	1.100	-	-	Forage	
11	Ouriène	"	"	808 500	394 600	46	-	-	Forage artésien	
12	Sohb El Char	"	"	800 000	390 000	189	-	-	Forage	
13	Laoua Bouamama	"	"	803 808	495 000	200	-	-	Oued	
14	Guefaïf	"	Guefaïf	779 000	408 000	352	-	-	Sourcee	
15	Defta	TAOURIRT	El Aieun	765 000	448 000	40	25	-	Sourcee	
16	Ain Tameur	"	"	760 000	448 000	24	12	-	Sourcee	
17	Betmat Jamâa	"	"	780 787	440 440	-	-	500	Oued	
18	Méhiris	"	"	740 000	450 000	220	150	-	Oued	
19	Ras Irsane	"	"	760 000	440 000	28	12	-	Oued	
20	Oulad Sidi Cheikh	"	"	764 000	447 000	30	25	-	Sourcee	
21	Bourdime	"	"	767 000	451 000	52	-	-	Oued	
22	Bled Taftrat	"	Keohra Komadi	765 000	452 000	12	-	-	Sourcee	

.... /

(suite)

(2/2)

M d'Ordre	Nom du périmètre	Localisation		Coordonnées		Superficie irriguée			Origine	Observations
		Cercle	Commune rurale	X	Y	Pérenne	Saisonnaire	Crue		
23	Moulay Tayab et S. Moussa	TAOURIRT	Keobra Komadi	740 000	452 000	57	-	-	Oued	
24	Beld Tancherfi	"	Tancherfi	753 000	422 000	70	10	-	Oued	
25	Boussadane	"	Mestegneur	752 000	425 000	120	-	-	Oued	
26	Kestegneur	"	"	750 000	446 000	120	280	-	Oued	
27	Dar Homada	"	"	753 000	424 000	42	5	-	Sourcee	
28	Kentegneur	"	"	746 000	434 000	100	60	-	Sourcee	
29	Ain El Khial	"	"	753 000	443 000	50	10	-	Oued	
30	Kedist Trab	"	"	743 000	443 000	35	-	-	Oued	
31	Ain Khanouss	"	"	750 000	435 000	12	4	-	Sourcee	
32	N'dar	"	"	754 000	439 000	40	-	-	Sourcee	
33	Sfissif	"	"	730 000	440 000	45	35	-	Sourcee	
34	Sidi Okba	"	"	749 000	446 000	80	70	-	Oued	
35	Kasseria	"	Ahl Oued Za	750 000	405 000	33	-	-	Oued	
36	Oued La	"	"	715 000	443 000	2 600	-	-	Oued	
37	Kharoub Dar Glimane	"	Geuttitir	700 000	422 000	1 100	-	-	Oued	
38	Taloust Dar Slimane	"	"	730 000	435 000	50	-	-	Oued; Sourcee	
39	Debdou	"	Debdou	712 000	371 000	213	40	-	Oued	
40	Bour Oulad El Isghir	"	Side Laheen	760 000	405 000	34	-	-	Oued	
41	Aousn	"	"	737 000	377 000	76	-	-	Oued	
42	El Rgress	"	"	757 000	403 000	45	-	-	Oued	
43	Ain Lajbar	"	"	757 000	387 000	7	41	-	Sourcee	

A N N E X E 4

PERIODE DE SEMAILLE ET DE RECOLETTE DES PRINCIPAUX PRODUITS AGRICOLES

Type de produit	Saison agricole			
	Semaille	Récolte	Semaille	Récolte
Blé dur	15-10 au 20 Janvier	début Juillet au 20 Aout		
Blé tendre	15-10 au 20 Janvier	Début Juillet au 20 Aout		
Orge	15-10 au 20 Janvier	Juillet		
Maïs	-	-		
Sorghe	-	-		
Avoine	15-10 au 31 Décembre	Juillet		
Fève	Décembre	Fin fevrier - mars vent Juin en sec.		
Lentilles	Fin Janvier	Juin		
Betteraves				
Canne à suors				
Tomate	Mars jusqu'à début avril	Début récolte en juin		
Pomme de terre	Février	Début récolte en juin		
Luzerne	2 périodes: (fin aout- début septembre)-(mars).	6 à 8 coupes/au à partir de la 2eme année		
Mélanges fourrages	15-11 au 31-12	Mai		
Oliviers	-	15-11 au 20.12		
Amandiers		Mi-Juin - Juillet		
Abricotiers		Mi-Mai - Juin		

La pluviométrie étant le plus souvent insuffisante et tres mal réparties dans le temps et dans l'espace durant la période automanale, l'époque de semis des céréales et des légumineuses devient irréguliers et se prolonge ainsi jusqu'au mois de janvier de l'année suivante.