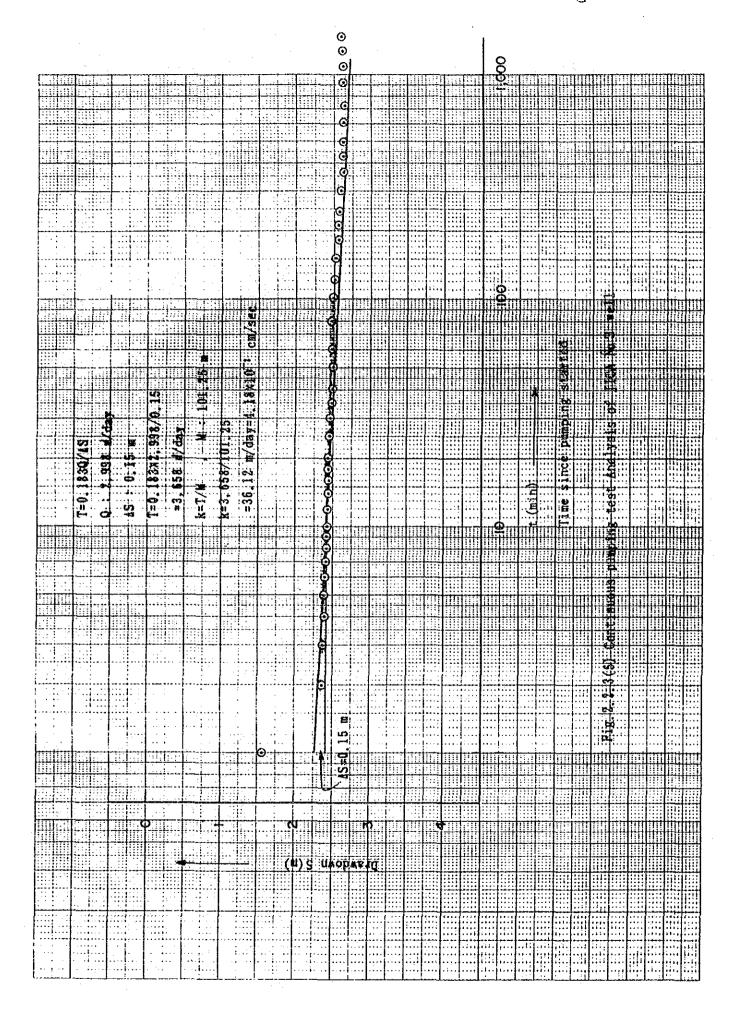
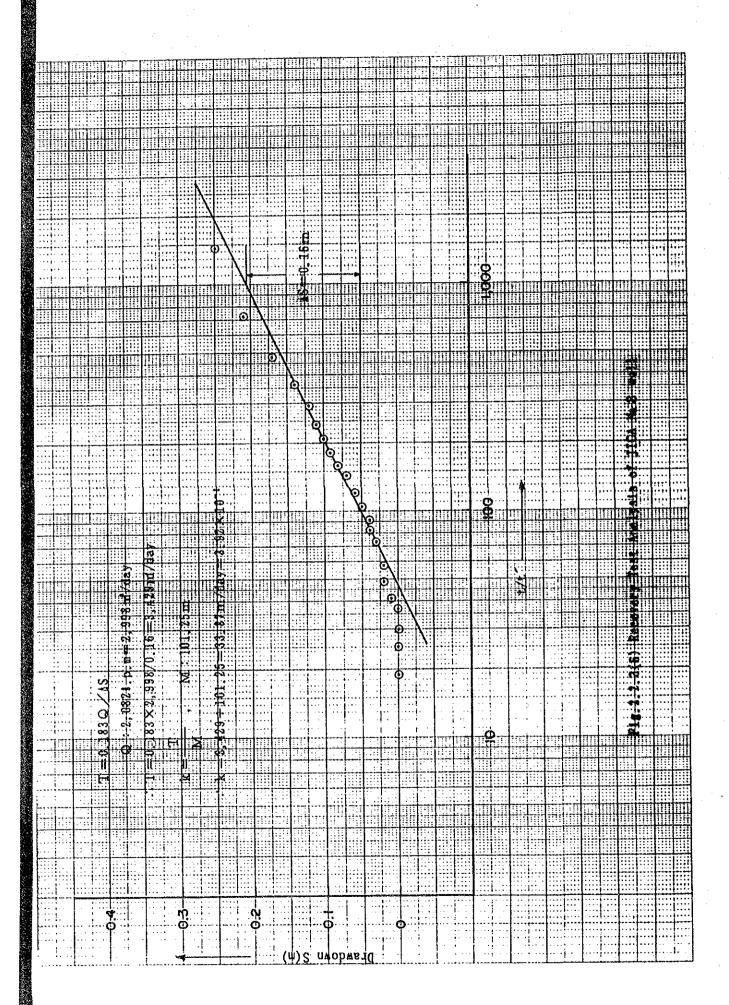
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Result of pumping test

JICA Well (JI-4)

Step Drawdown Test(Prueba de estapas sucesivas)

Date(Fecha): 15 Oct., 1992

Site No. (Sitio o lugar): JICA No. 4

Depth(Profundidad): 200 m , Diameter(Diametro):12 3/4 inches(pulgadas)

Static Water Level(Nivel estatico de agua): 94.28 m Pump type(Tipo de bomba): 30-kw submersible pump

Inspector: Orlando Lopez Solis

Time Time sinse pumping	water	Drawdown	Notes
started	level		
Hora Hora desde		Descenso	Notas
comienzo	de		
de bombeo	bombeo		
t(min)	feet		meter
	(pies)		metro)
10:00 am 0	309.33	0.00	0.00
1	323.11	13.78	4.20 h=5"
2	322.00	12.67	3.86 Q=100 gpm
3	320.00	10.67	3.25 kgf/cm2=11
4	319.33	10.02	3.05 Volts=400
5	319.00	9.67	2.95 Amps=40
6	318.83	9.50	2.90 Hz=52
7	318.42	9.09	2.77
8	318.25	8.92	2.72
9	318.08	8.75	2.67
10	318.00	8.67	2.64
12	317.92	8.59	2.62
14	318.92	9.59	2.92
16	319.00	9.67	2.95
1.8	319.16	9.83	3.00
20	319.25	9.92	3.02
25	**	16	11
30	**	27	
35	₹*	**	
40	\$ P	. **	11
50	£4	10	•
60	67	FP	11
80	319.67	10.34	3.15
100	319.42	10.09	3.08
12:30 120	11	**	11
1	324.00	14.67	4,47 h=13"
2	325.58	16.25	4.95 Q=150 gpm
3	326.00	16.67	5.08 Volts=400
4	326.58	17.25	5.26 Amps=40
5	326.83	17.50	5.33 kgf/cm2=9
6	327.00	17.67	5.39
7	327.16	17.83	5.43
8	327.25	17.92	5.46
9	11	98	\$9
10	327.33	18.00	5.49
12	**	59	96
14	327.42	18.09	5.51

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		• .	•			
	16		327.44	18.11	5.52	$\mathbb{E}_{\mathbf{x}}(\mathbf{x}) = \mathbb{E}_{\mathbf{x}}(\mathbf{x}) = \mathbb{E}_{\mathbf{x}}(\mathbf{x}) = \mathbb{E}_{\mathbf{x}}(\mathbf{x})$
	18		##	**	**	
	20			10 17	E E 4	
	25		327.50	18.17	5.54	
	30 35		327.58	18.25	5.56	
	40		327.50	18.17	5.54	
	50		327.67	18.34	5.59	
	60		fi	P#	11	
	80		**	"	**	the second second
	100		327.75	18.42	5.61	
14:00	120	•	**	**	11	
	1		332.00	22.67	6.91	h=23"
	2		333.43	24.00	7.32	Q=200 gpm
	3		334.00	24.67	7.52	kgf/cm2=6 Volts=400
	4 5		334.35	24.92 25.17	7.60 7.67	VOI US=400
			334.50 334.67	25.34	7.72	
	6 7	:	334.75	25.42	7.75	en e
	8		335.00	25.67	7.82	
	9		335.08	25.75	7.85	
	10		н ,	51	57	
	12	•	335.16	25.83	7.87	
	14		**	17	17	
	16		11	***	**	
	18	1 1	335.08	25.75	7.85	
	20	. :	335.00	25.67	7.82	
•	25		H	**		
•	30		11	11	 H	
	35	1. A	61	11	t 1	•
	40 50		335.08	25.75	7.85	•
•	60		335.16	25.83	7.87	
	80		335.25	25.92	7.90	
	100	•	335.33	26.00	7.92	
16:00	120		11	#	n	10 m
		•	338.50	29.17	8.89	h=35"
	2		340.67	31.34	9.55	Q=250 gpm
	1 2 3 4 5 6 7		340.83	31.50	9.60	kgf/cm2=2
	4		342.42	33.09	10.09	
	5		342.83	33.50	10.21	
	6		343.00	33.67 33.75	10.26 10.29	
	8		343.08 343.16	33.83	10.25	
	9		343.25	33.92	10.34	
	10		343.33	34.00	10.36	•
	12		343.42	34.04	10.38	
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	16		79	**	11	
	1.8		11	er er	Ħ	•
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	25		343.50	34.70	10.58	
	30		343.58	34,25	10.44	
	35		- A		10 47	
	40		343.67	34.34	10.47	

	50	**	**	**	
	60	343.75	34.42	10.09	
	80	343.92	34.59	10.54	
.*	100	344.00	34.67	10.57	
18:00	120	344.08	34.75	10.59	
	1	346.08	36.75	11.20	h=42"
	2	346.42	37.09	11.31	Q=270 gpm
	3	347.00	37.67	11.48	kgf/cm2=0
· ·	4	347.42	38.09	11.61	Volts=400
	5	347.67	38.34	11.69	Amps=40
	6	11	41		
	7	347.75	38.42	11.71	
	8	347.67	38.34	11.69	
•	9	347.75	38.42	11.71	
**	10	tt	tf .	11	
•	12	347.83	38.50	11.73	
	14	***	51	Ħ	
	16	11		**	
• 1	18	tt	tt :		
	20	41	50	***	
	25	99		#	
	30	347.92	38.59	11.76	
	35	348.00	38.67	11.79	
	40	348.08	38.75	11.81	
4	50	348.25	38.92	11.86	
	60		#	77.00	
	80	348.33	39.00	11.89	
	100	11	. "	11.00	
20:00	120		**	87	

Continuous Pumping Test(Prueba de bombeo a caudal constante)

Date(Fecha): 16 OCT.,1992 Site No.(Sitio o lugar): JICA No.4 Well

Time	Time sinse pumping started	Dynamic water level	Dre	Notes	
Hora	Hora desde comienzo	Nivel de bombeo	Des	scenso	Notas
	de bombeo	feet	feet	meter	
	t(min)	(pies)	(pies)	(metro)	
10:00		309.33	0.00	0.00	
*	1	332.92	23.59	7.19	h=42"
	2	340.00	30.67	9.35	Q=270 gpm
	3	341.16	31.83	9.70	kgf/cm2=0
	4	342.83	33.50	10.21	Volts=400
	5	343.92	34.59	10.54	Amps=40
	6	344.83	35.50	10.82	Hz=52
	7	345.75	35.92	10.95	
	8	345.67	36.34	11.08	
	9	346.00	36.67	11.18	
100	10	346.16	36.83	11.23	
į.	12	346.42	37.09	11.31	

		t and the second			·
	14	346.58	37.25	11.35	
		346.67	37.34	11.38	
		346.83	37.50	11.43	
		346.92	37.59	11.46	
		347.16	37.83	11.53	
		347.25	37.92	11.56	and the second of the second o
en e		347.50	38.17	11.63	1
		347.58	38.25	11.66	
		347.67	38.34	11.69	
	60	et .	79		
	80	348.16	38.83	11.84	
· 1		348.42	39.09	11.91	
	40	et	91	**	
		348.58	39.25	11.96	
		348.67	39.34	11.99	
		348.83	39.50	12.04	n de financia. Notae de la composición
		349.00	39.67	12.09	
	00	349.16	39.83	12.14	Francisco de la companya de la comp
	60	11			Temp.30.9 C
		349.08	39.75	12.12	cond.361uS/cm
	80	11	**	•	
	00	349.92	40.09	12.22	
22:00 7	20	349.58	40.25	12.27	
	00	350.00	40.67	12.40	
04:00 1,0	080	s†	**	. **	
07:00 1,2	160	1 1	et .	46	
10:00 1,4				11 .	Temp. 28.8 C
13:00 1,6	20	e1	11	**	cond.513uS/cm
16:00 1,8		£9	11	n	
19:00 1,9	980	,e1	**	11	
22:00 2,1	160	41	+)	**	
01:00 2,3		•	•	#	
04:00 2,5		17	11	**	
07:00 2,7		et .	**		
10:00 2,8	380	H .	11	69	

Recovery Test(Prueba de recuperacio'n)

Date(Fecha): 18 OCT., 1992 Site No.(Sitio o lugar): JICA No.4 Well

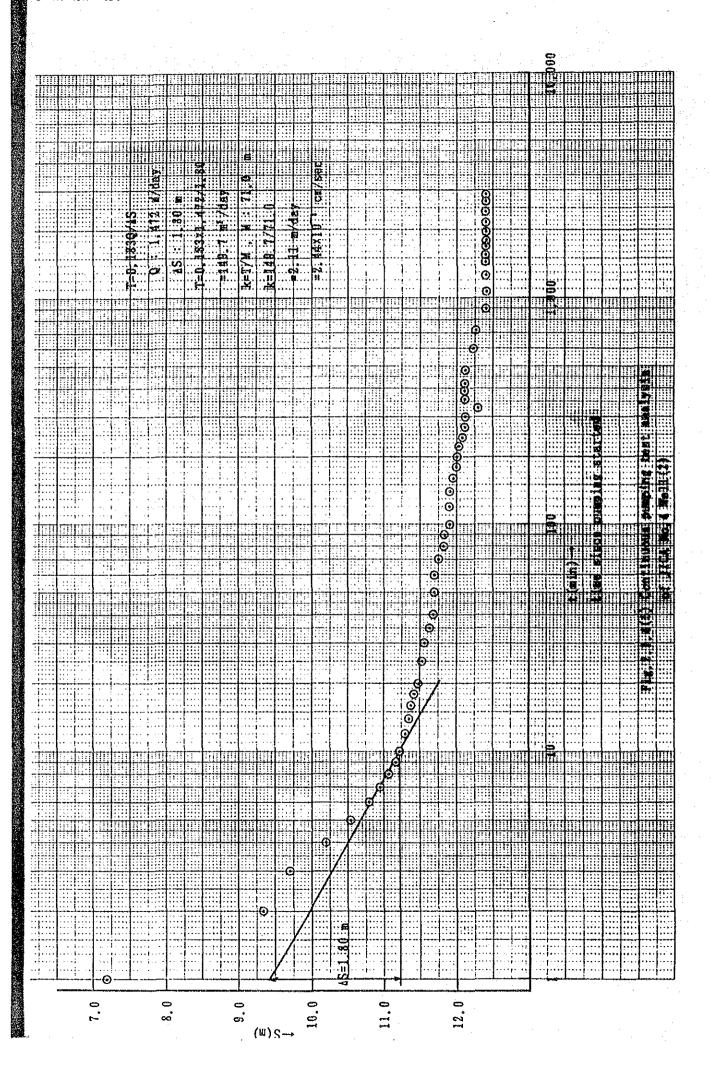
Time	Time sinse pumping stopped	Time sinse pumping started	Rate	Water level	Residu Drawdo	
Hora	Hora desde comienzo de recupe-	Hora desde comienzo de bombeo		Nivel de Agua	Descer residu	
	racio'n	Domooo		feet	feet	meter
	t'(min)	t(min)	t/t'	(pies)	(pies)	(metro)
10:00	0	1,440	QM.	350.00	40.67	12.40
	1	1,441 1	,441	324.00	14.67	4.47
	2	1,442	721	317.00	7.67	2.34
	3	1,443	481	313.83	4.50	1.37
	4	1.444	361	312.75	3.42	1.04

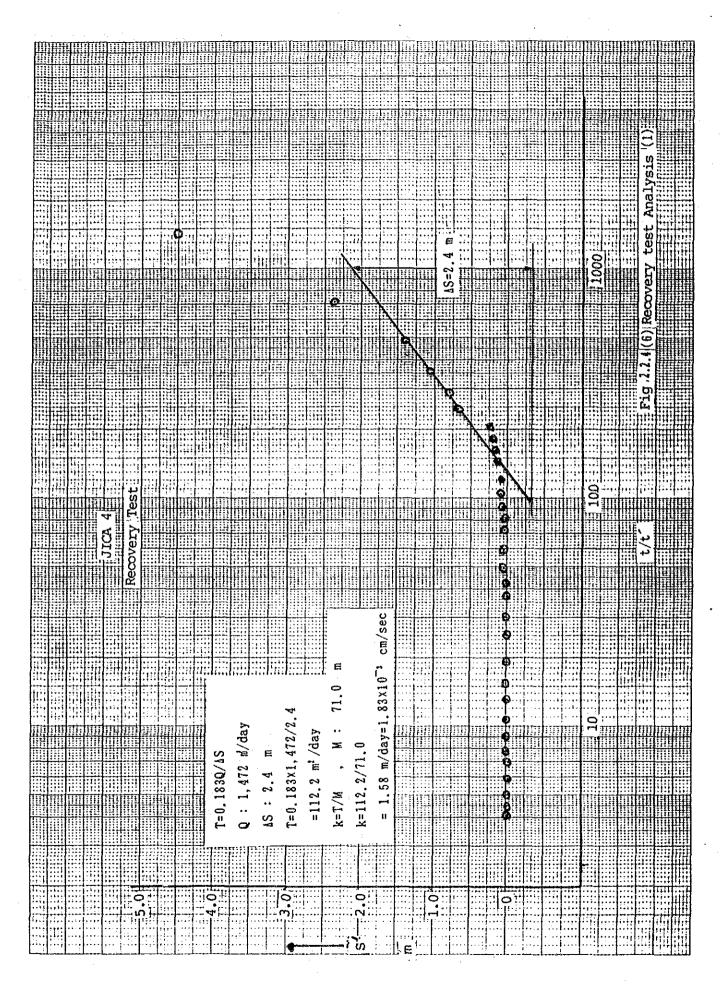
		·			•	
* * *	5	1.445	289	311.83	2.50	0.762
	6	1,446	241	311.58	2.25	0.686
	7	1,447	207	310.00	0.67	0.204
	8	1,448	181	309.92	0.59	0.180
•	9	1,449	161	309.83	0.50	0.152
	1.0	1,450	145	309.75	0.42	0.128
	12	1,452	121	309.67	0.34	0.104
•	14	1,454	104	309.58	0.25	0.076
	16	1,456	91.0	309.50	0.17	0.052
	18	1,458	81.0	309.42	0.09	0.029
	20	1,460	73.0		ti.	**
	25	1,465	58.6		19	**
	30	1,470	49.0	: **	17	**
	35	1,475	42.1	309.33	0.00	0.00
•	40	1,480	37.0	**	"	**
•	50	1,490	29.8	**	* 11	11 (a)
	60	1,500	25.0	17	. **	11
	80	1,520	19.0	**	•••	** 1
	100	1,540	15.4	9.2	. 11	**.
12:00	120	1,560	13.0	**	111	**
	150	1,590	10.6	tt .	11	**
•	180	1,620	9.0	# ?	11	ŧf
	210	1,650	7.8	\$9	§†	11
14:00	240	1,680	7.0	**	n	11
	300	1,740	5.8	**	**	17
	360	1,800	5.0	***	**	**
	420	1,860	4.4			11
18:00	480	1,920	4.0	** .	. 11	**
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Result of pumping test

JICA Well (JI-5)

Step Drawdown Test(Prueba de estapas sucesivas)

Date(Fecha): 21 Oct.,1992

Site No. (Sitio o lugar): JICA No.5

Depth(Profundidad): 200 m .Diameter(Diametro):12 3/4 inches(pulgadas)

Static Water Level(Nivel estatico de agua): 100.18 m Pump type(Tipo de bomba): 30-kw submersible pump Inspector:Orlando Lopez Solis

^我就是一条**要跟我们的**我们,我们也是我们的人们就会说,这个时间,我们就会说,我们也没有一个人的人,这个人的人,这个人的人,不是一个人的人,不是一个人的人,不是

Time	Time sinse pumping	Dynamic water	Draw	Notes	
Hora	started Hora desde comienzo de bombeo	level Nivel de bombeo	Desc	Notas	
	t(min)	feet	feet	motor	
	C(MLII)	(pies)	(pies)	meter	
09:30	am O	328.67	0.00	(metro)	
09:30	аш 0 1	331.00	2.33	0.00	1. 1911
	$\frac{1}{2}$	331.00	4.33	0.71	h=5"
	3		0 10		Q=100 gpm
	4 °	330.83	2.16	0.66	kgf/cm2=11
		**	71	11	Volts=400
	5 6	84	**	11	Amps=40
	7	. 11	51	11	m 00 FG
	8	330.92	2.25		Temp.33.5C
	9	330.82	2.20	0.69	cond.1.003
	10	ti	Ħ	17	mS/cm
	12	ts	##	17	
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	$\hat{\overline{2}}$	331.83	3.16	0.96	Q=150 gpm
	3	332.00	3.33	1.01	Volts=400
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13:30	120		332.08		3.41		1.04	h=23"
	1 2		332.67	•	4.00		1.22	Q=200 gpm
	2		332.92		4.25		1.33	kgf/cm2=6
•	3				4.33		1.32	Volts=400
	4 5		333.00	•	4.49	: :	1.38	10103-400
	5		333.16					
	6		333.08		4.41		1.34	
	7		333.00		4.33		1.32	
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15:30	120		11		11		11	
20.00	1		334.20		4.75		1.45	h=35"
	2		333.75		5.08		1.55	Q=250 gpm
	3		333.92		5.25		1.60	kgf/cm2=2
	4		334.00		5.33		1.62	
•	5		334.08		5.41		1.65	
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17:30	120	tt	**	f 7	
		334.50	5.83	1.78	h=42"
•	1 2	334.58	5.91	1.80	Q=270 gpm
	3	334.67	6.00	1.83	kgf/cm2=0
		**	**	**	Volts=400
	4 5 6	Ħ		**	Amps=40
	6	11	**	43	
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Continuous Pumping Test(Prueba de bombeo a caudal constante)

Date(Fecha): 22 OCT.,1992

Site No. (Sitio o lugar): JICA No.5 Well

	and the state of t				
Time	Time sinse pumping	Dynamic water	Dra	awdown	Notes
	started	level			
Hora	Hora desde	Nivel de	Des	censo	Notas
	comienzo	bombeo	· · · · · · · · · · · · · · · · · · ·		
	de bombeo	feet	feet	meter	
* :	t(min)	(pies)	(pies)	(metro)	
09:00	am 0	328.67	0.00	0.00	
	1	331.08	2.41	0.735	h=42"
•	2	332.67	4.00	1.219	Q=270 gpm
	3	333.67	5.00	1.524	kgf/cm2=0
	4	334.16	5.49	1.673	Volts=400
	5	334.42	5.75	1.753	Amps=40
	6	334.67	6.00	1.829	-
•	7	334.75	6.08	1.853	
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	12	49	**	11	

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15:00	360		89		
	420	. 11	11	**	
17:00	480	11	* * **		Town Cond
19:00	600	tt.	**	TT	Temp. Cond.
21:00	720	. 11	н		C mS/cm
00:00	900	**	. 64	**	33.4 1.00
03:00			19 1	H	33.6 1.00
	1,080				34.9 1.00
06:00	1,260	***	9 1		35.0 1.00
09:00	1.440	**	. 11	11	

Recovery Test(Prueba de recuperacio'n)

Date(Fecha): 23 OCT.,1992 Site No.(Sitio o lugar): JICA No.5 Well

Time	Time sinse	Time sinse	Rate	Water	Residu	ดไ
	pumping	pumping		level	Drawdo	
	stopped	started		20,02	Drando	, 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Hora	Hora desde	Hora desde	Razo'n	Nivel	Descen	so
	comienzo de	comienzo de		de	residu	al
	recupe-	bombeo		Agua	42.7	
	racio'n			feet	feet	meter
	t'(min)	t(min)	t/t:	(pies)	(pies)	(metro)
09:00	0: ,	1,440	-	334.75	6.08	1.853
	1 ,	1,441 1.	441	_	-	-
	2	1,442	721	330.25	1.58	0.482
	3	1,443	481	329.00	0.33	0.101
	4		361	328.92	0.25	0.076
	5		289	328.83	0.16	0.049
	6		241	328.75	0.08	0.024
	7		207	"	0.00	0.024
	8	-	181	44	. 17	1 11
	9		161	328.67	0.00	0.00
	10		145	020,01	0.00	0.00
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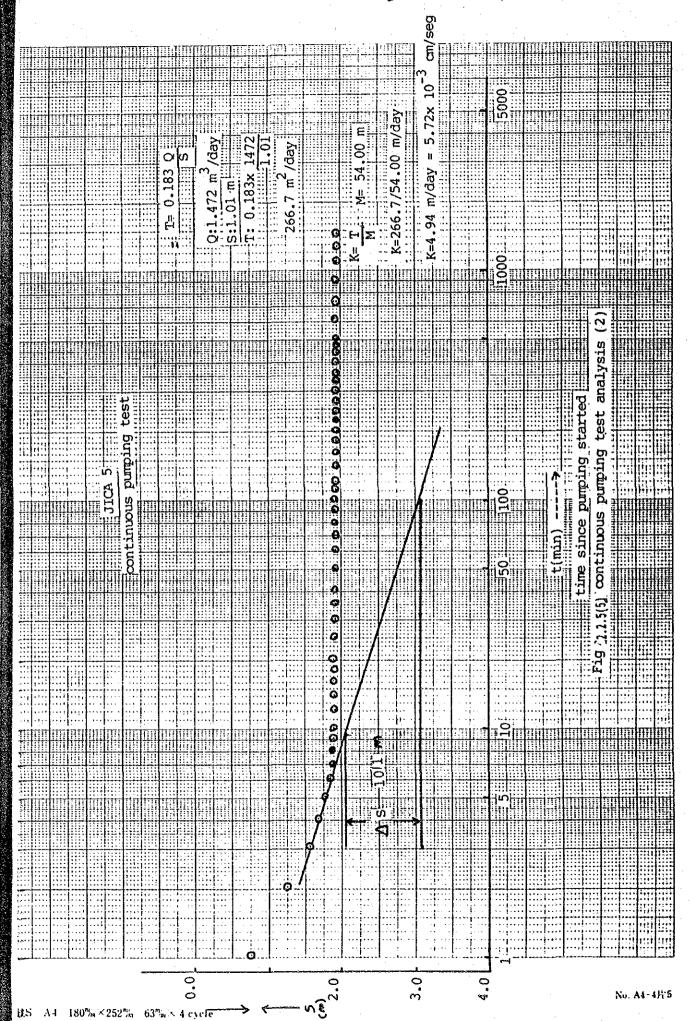
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		25	1,465	58.6	11	Ħ	
		30	1,470	49.0	**	**	**
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		60	1,500	25.0	**	91 °	**
		80	1,520	19.0	**	11	11
		100	1,540	15.4	11	† †	11
	11:00	120	1,560	13.0	**	**	•
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		210	1,650	7.8		**	
	13:00	240	1,680	7.0	н .	11	**
•	13.00	300	1,740	5.8	11	**	**
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		420	1,860	4.4	11	* **	
	17:00	480	1,920	4.0	**	97	**
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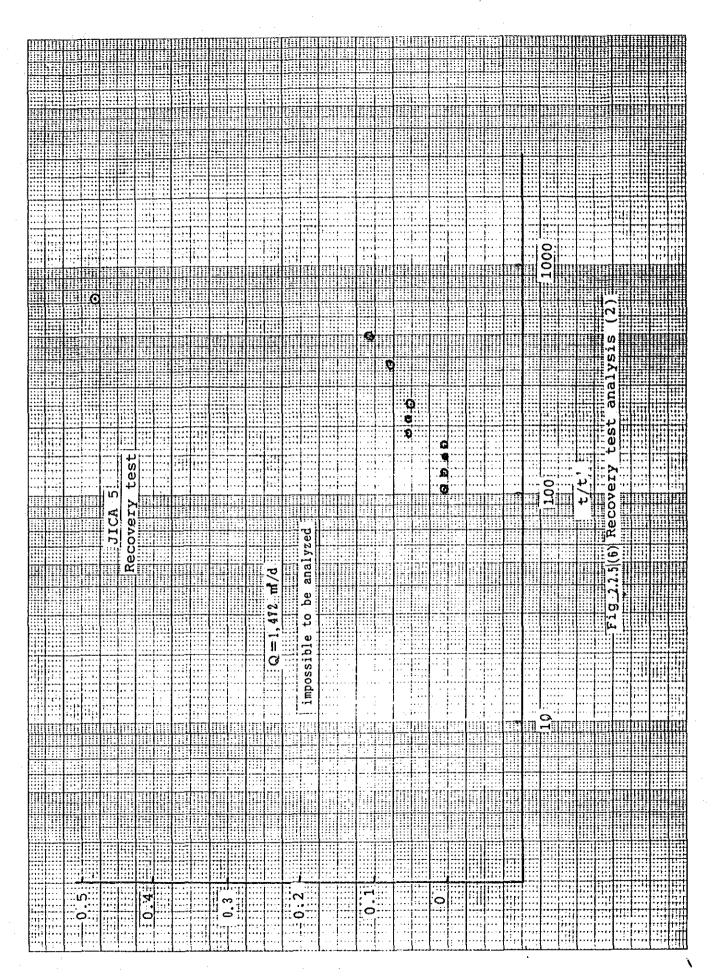
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Result of pumping test

Joan Ramon Robles, El, Pique

Step Drawdown Test(Prueba de estapas sucesivas)

Date(Fecha): 3 Nov., 1992

Site No.(Sitio o lugar): Joan Ramon Robles, El Pique
Depth(Profundidad): 138 m , Diameter(Diametro): 13 1/2 inches(pulgadas)
Static Water Level(Nivel estatico de agua): 39.80 m
Pump type(Tipo de bomba): 110-kw turbine pump
Inspector:Orlando Lopez Solis

Time	Time sinse pumping	Dynamic water	Drav	vdown	Notes
Hora	started Hora desde comienzo	level Nivel de	Desc	censo	Notas
	de bombeo	bombeo		2	
	t(min)	meter	feet	meter	
	_	(metro)	(pies)	(metro)	
16:00	0	39.80	•	0.00	
	1				h=5"
	2	42.00		2.20	Q=146 gpm
	3	11	•	. **	
	4				
	5	41.00		1.00	
	<u>6</u>	41.60		1.80	
	7	41.80		2.00	Temp.30.4C
•	8	41.90		2.10	cond.0.998
	9	42.90		3.10	mS/cm
	10	43.00		3.20	
	12	* 11		"	
	14	11		**	
	16	**		**	
	18	**: ••		**	
	20	11		••	
	25	••		••	
	30	11		**	
	35	11		,,	
	40	**		,	
	50	11		11	
	60	11	•		
	80	. 11		**	
10.00	100 120			***	·
18:00	120	46.10		6.30	h=15"
	2	46.60		6.80	Q=250 gpm
	3	46.90		7.10	Q-250 gpm
	4	46.80		7.10	
	5	40.00		7.00	Temp.30.3C
	6	**		17	cond.
	7	11		**	1.003mS/cm
	8	11		9#	T.000m3/Cm
	9	11		77	
	10	11		**	
	12	11		**	
	14	49		**	
	•				

	4				* *		
	16	49			Ħ		4
	16 18 20 25 30 35 40 50 60 80 100 120	54			**		
	20	11			. 19		
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	40	**			11		
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	80 80	40			**		
	100	•			n 11		
20:00	120	" 46.83			7.03	h=31"	
. :	1 2 3	46.85			7.05	Q=351	gpm
	3	46.85 46.90			7.05 7.10 7.15		
	4	46.95			7.15		
	5 6	**			**		
	6 7	144			11 .		
	- 8	1			11	•	
	9 10	T#			••		
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	14 16 18 20 25 30	; **			. 11		
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	30	. "		* * * * * * * * * * * * * * * * * * * *	11	* .	
	35 40	**	٠		71		• .
	50	, 11			37		
	50 60	• •			**	:	
	80 100	17			11	÷	
22:00	120	ŧr		•	*1		
	1	47.00			7.20 7.70	h=52" Q=453	arnm.
	1 2 3	47.50 47.87		1.4.2	8.07	Q=455	g b m
	3 4	47.90	٠.		8.10		
	5	47.95			8.15		
÷	6	47.96		•	8.16 8.19		
	8	47.99 48.10			8.30		en de en
	9	48.17			8.37		
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	60		17		•
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	100				
00:00	120	:	**		•
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Continuous Pumping Test(Prueba de bombeo a caudal constante)

Date(Fecha): 4 Nov.,1992 Site No.(Sitio o lugar): Joan Ramon Robles, El Pique

			·	and Artifaction of the Control of th	
Time	Time sinse	Dynamic	Dra	awdown	Notes
	pumping	water			
	started	level	$v_{ij} = \{v_{ij} \in \mathcal{A}_{ij} \mid i \in \mathcal{A}_{ij}\}$		•
Hora	Hora desde	Nivel de	Des	scenso	Notas
-	comienzo	bombeo			
	de bombeo	meter	feet	meter	
	t(min)	(metro)	(pies)	(metro)	
09:00	0 .	39.80		0.00	
	1	42.00		2.20	h=51"
*	2	42.50		2.70	Q=451 gpm
	3	42.90		3.10	
	4	43.30		3.50	
	5	43.60		3.80	
	6	43.80		4.00	
	7	43.90		4.10	
	8	H,		11	
	9	44.10		4.30	
	10	45.00		5.20	
	12	45.60		5.80	
	14	45.70		5.90	
	16	45.80		6.00	
	18	46.00		6.20	
	20	46.30	•	6.50	
	25	46.90		7.10	
	30	.47.56		7.76	
	35	**		.*	
	40	**		11	
	50	**		**	
	60	**		**	
	80	. 19		**	
•	100	**		**	
	120	11		11	
	150	11	4		
	180	11		. **	•
	210	**		11	•
	240	F1	÷	11	•
	300	44		† ††	
15:00	360	11		. ••	
20.00	420	11			
17:00	480	**		n	
19:00	600			22	
21:00	720	**		11	
ي ∪ ∪ ، د ب	140				

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00:00 900 "
03:00 1,080 "
06:00 1,260 "
09:00 1,440 "
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Recovery Test(Prueba de recuperacio'n)

Date(Fecha): 5 Nov.,1992 Site No.(Sitio o lugar): Joan Ramon Robles, El Pique

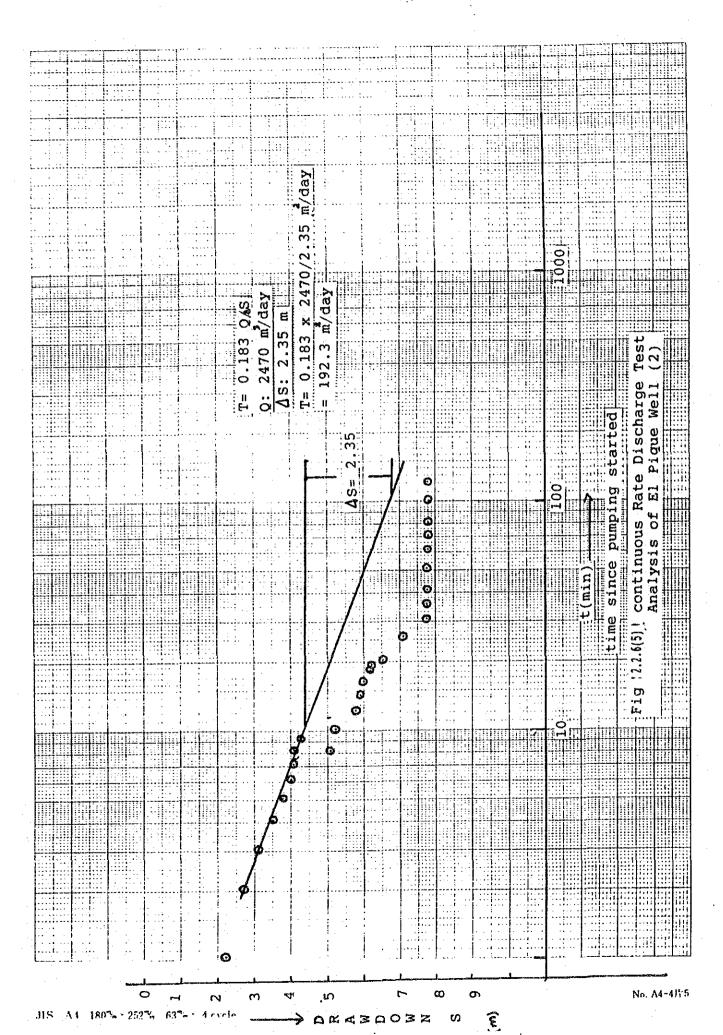
Time	Time sinse pumping	Time sinse pumping	Rate	Water level	Resid Drawd	
	stopped	started		10101	DIANG	OHII
Hora	Hora desde	Hora desde	Razo'n	Nivel	Desce	nso
nora		comienzo de		de	resid	
	recupe-	bombeo		Agua	20020	
	racio'n			meter	feet	meter
	t'(min)	t(min)	t/t'	(metro)	(pies)	(metro)
09:00	0	1,440	-	47.56		10.48
	1		, 441	43.30		6.22
*	$\overline{2}$	1,442	721	42.60		5.52
	3	1,443	481	41.00	•	3.92
	4	1,444	361	40.30		3.22
	5	1,445	289	39.20		2.12
	6	1,446	241	38.45		1.37
	7	1,447	207	37.80		0.72
	. 8	1,448	181	37.60		0.52
	9	1,449	161	37.40		0.32
	10	1,450	145	37.08		0.00
	12	1,452	121			•
	14	1,454	104	**	:	71
	16	1,456	91.0	•		
	18	1,458	81.0	57 ST		11
	20	1,460	73.0	**		11
	25	1,465	58.6	H , 1		11
	30	1,470	49.0	#forth in		***
	. 35	1,475	42.1	**	4	***
	40	1,480	37.0	ŧf		11
	50	1,490	29.8	•		**
	60	1,500	25.0	16		
	80	1,520	19.0	**		**
	100	1,540	15.4	41	•	11
11:00	120	1,560	13.0	••	•	**
	150	1,590	10.6	11		* 11
	180	1,620	9.0	ef '		£1
_	210	1,650	7.8	19		"
13:00	240	1,680	7.0	17		n
	300	1,740	5.8	11		
	360	1,800	5.0			11
	420	1,860	4,4	TF TF		**
17:00	480	1,920	4.0	44	•	

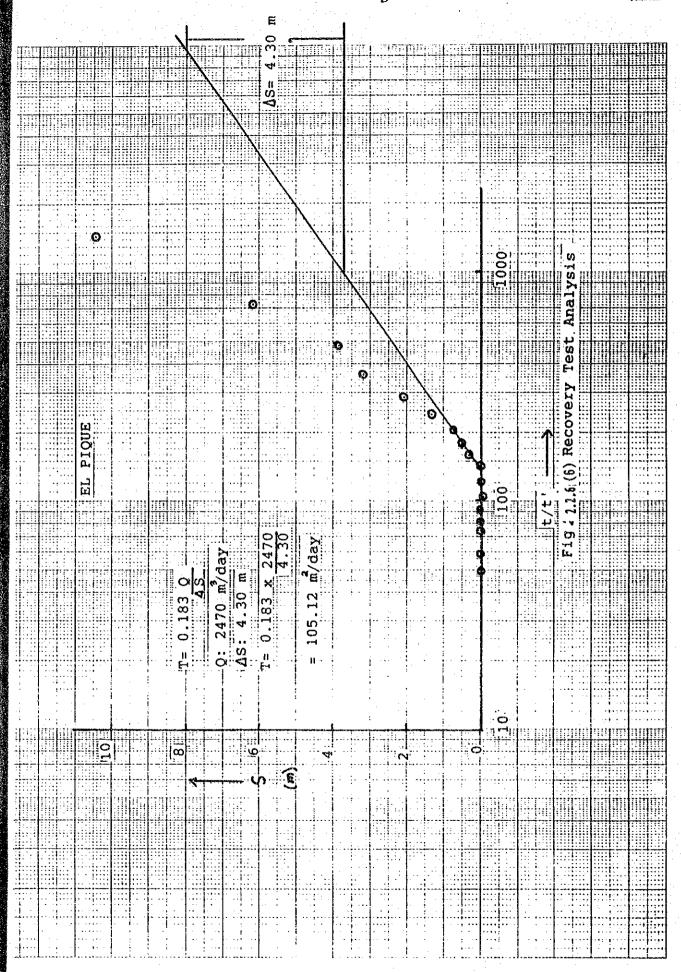
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146GPM					
2 36.16d/h					
3					
	0 0				
(E) (S) 5	Step 2 250GPM Ste	p 3	.,		
		GPM .			
6	00,.02,	71d/h Ste	p 4		
7		453	GPM		
		102	.9d/h		
8				_	[
9					
10				ļ	
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0	2 4	6	.8		
V	4				
	Time(hour)-	•			
	time since	pumping start	ted		
Fig.	2.2.6(1) S~ t rela	ation of step	drawdown tes	t	
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	(8pm) 146 250 351 453			
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	0 0 0	1/u=9.4x10' S=7.7 m t=112 min=7.78x10-' day r/B=0.1	k/B=T(r/B) ² /r ² k/B=122.6×0.1 ² /0.1905 ² =33.8	00	Techina
	G 0 G G C C C C C C C C C C C C C C C C	I/u=9.4 S=7.7 I t=112 m r/B=0.1	K / B K / B	pumping started tools rate discharge Test sis of El Pique Well (1)	
T=0.0786QW(u,r/B)/S S=4Tt/r¹(1/u) Q:2,470 m/day r:0.1905 m	1=0.0130x2,410x1.0/1.1 =122.6 m/day S=4x122.6x7.78x10 ⁻² /0.1905 ² x9.4x10 ² =1.12			t (min) Time since pump Fig 2.2.6(4) Continuous	
	" " " "				
700	100				
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MONTHLY WATER LEVEL

LAKE MANAGUA

LAKE ASOSOSCA

Unit: m.s.n.m.

				1.							V V.	8.2.U.B	•
YEAR	JAN	FEB	MAR	APR	YAK	JON	JOL	AUG	SEP	720	NOV	DEC	λv.
1958	39.4	4 39.2	7 39.22	39.20	39.25	39.52	39.60	39.61	39.42	39.63	39.72	39.61	39.46
1959	39.4	3 39.2	0 39.03	38.87	38.60	-		-	-	. •		-	•
1960		· =		. •	-	•	-	•	•	. •	**	-	•
1961) <u>-</u>	-	-		-	-	. •	-		•	•	-	-
1962			;=			-	-	-,	-		-	•	•
1963		•	. · · · •.	, . -	-	38.08	38.09	38.05	38.00	38.17	38.33	38.31	(38.15)
1964	38.1	3 37.9	15 -				~	_	-	. •	. •	-	-
1965	, . *	· ·	•	1 11		4.0			37.20				(37.40)
1966	37.5	2 37.1	3 - 36.93	36.76							38.00	37.87	37.38
1967	37.7	2 37.5	8 37.42			37.10			36.95		37.06	36.92	
1968	36.7	9 36.6				36.71		36.78	36.86		37.74	37.62	36.87
1969	37.5	0 37.3	5 37.23	37.06	37.03	37.30	37.50	37.66	38.06	38.73	39.28	39.20	
1970	39.0		6 38.82	38.68	38.58	38.71	38.71		39.16		39.67	39.60	
1971	39.4	9 39.3	5 39.19	39.00	38.88	38.84	38.69	38.65	38.90	39.35	39.52		39.11
1972	(39.2	6)(39.1	0)(38.94)(38.78)	38.62	38.67	38.57	38.42	38.31	38.27	38.18		(38.60)
1973	37.9	2 37.7	9 37.65	37.50	37.37	37.42	37.40	37.54	38.13				37.99
1974	39.0	3 38.8		38.54						39.18	39.11	38.98	(38.64)
1975	38.8			38.33							39.31	39.31	38.48
1976	39.1	8 39.0	3 38.82	(38.32)	(38.00	(38.32)	38.60	38.46	38.32		38.48		
1977	38.1	38.0	0 37.81	37.58	37.46	37.65	37.58	37.43	37.37	37.31	37.25	37.12	37.56
1978	36.9		8 36.59		-	•	-	-	-	-	-	-	(36.20) (36.50)
1979	-		•	•	-	•	-	-		• '	-	-	(36.50)
1980		#	36.90	36.80	36.70	37.00	37.00	36.90	36.90	37.60	-	-	(36.98)
1981	37.6	0 37.5	0 37.40			38.00	38.10	38.00	38.30	38.30	38.30	(38.25	(37.82)
1982	38.2	0 38.1	0 (37.90	37.70	38.20	39.90	40.00	39.90	39.70				(39.16)
1983	39.8	39.7	0 38.20	38.20		38.90	39.60	38.60	-	-		•	(38.90)
1984	38.6	38.4	0 38.20	38.10	37.90	' -	-	-	-	-	•	-	(38.00) (38.00)
1985	•	-	_	-			-	-	-	-		-	(38.00)
1986	-		-	· •	37.50	38.20		38.10	38.10	38.10	38.00	37.90	(38.10)
	37.7	37.6	0 37.40	37.30	37.10	37.00	37.00	37.10	37.20	37.20	37.20		
1988	36.9	36.6	0 -	(38.30)		· · · -	•	38.90	38.80				(38.21)
1989	38.8	38.6	0 38.40	(38.30)	38.20	38.10	38.10	38.10	38.30				(38.38)
1990	38.3	38.2	0 38.20	38.00	37.00	37.80	37.70	37.40	37.70				
1991	37.7	37.5	0 37.40	37.20	37.10	37.20	37 20	37.00	37.00	37 20	37.10	37.00	37.22

SOURCE: DIRECCION DE RECURSOS HIDRICOS DPTO. DE HIDROGRAFIA, INETER ESTACION: LAGO DE MANAGUA SECTOR MIRAFLORES

Unit: a.s.n.a.

											ORLC:	1.8.R.Q	
YEAR	JAN	FEB	HAR	APR	XAY	JUN	JUL	AUG	SRP	oct	уоу	DRC	ÅV.
													40.608
1955		40.96		40.8	40.72								41.069
1956					41.57		41.59	41.52					41.592
1957						41.21	41.15	41.1	41.21	41.34	41.24		41.226
1958	-		40.88		40.92				41.22				41.050
1959									40.65			and the second of the	40.673
1960	1.	40.26			40.19				40.5			40.57	
1961					40.22				40.41				
1962		40.21											40,134
1963					40.19				10.26				
1964	40.04	39.94		39.85			40.07		40.05				39.990
1965	39.84		39.59	39.5	39.5			39.53	39.56			39.3	
1966	39.16		38.88		38.84				39.08			38.78	7.00
1967		38.47		the second of the	38.03	- 1 . i .	38.38	38.26	38.28		38.2		38.287
1968		37.56			37.32	37.46		37.27			37.43		
1969		36.8			36.37		36.61	36.78	36.87			37.08	
1970		35.69			36.4		36.65	36.84	37.11			37.03	
1971		36.71		36.2				36.34			36.63		
1972		35.44		35.89			35.98	35.84				35.57	
1973		35.82 36.22		35.48				36.31	36.43	36.78		36.62	
1974 1975	35.93	35.89		35.93 35.03			35.26	36.18	36.46 35.59		36.26		
1976	35.04	34.77	31.52	34.23			35.32		35.4	35.84	35.83	35.38	
1977			35.65	35.35				36.07			4. 3.4.5	35.93 35.83	
1978	35:54	35.05		34.24	34.21		34.89			35.44		4 4 77 2	34.95
	34.81	34.27	33.79	33.58	33.91	34.16	33.91		34.01			34.04	and the second second
1980	33.99	33.99		33.87	33.81				34.8		35.04	34.93	
1981	34.78		34.41			34.94		35.04			100		34.895
1982	35.06	34.87	35.76	34.27	35.2	34.88	35.22	35.48			35.88		
1983	35.51	35.18	35.09	35.03				35.18		35.45			35.204
1984		34.97		34.22	33.92				34.55		34.52	34.5	1.0
1985	34.4	34.37	34.24	- to 1 to 1	34.12		34.06	33.96		34.05			34.150
1986	34.3	31.25	10.1	33.98	33.9		34.45	31.39	34.3	34.28	34.21		
1987	33.91	33.83		33.63	33.77	33.71		33.87	33.82	33.95	33.81		
1988	33.58	33.43	33.38	33.38	33.53	34.11		34.97	35.29		35.99		34.499
1989	36.03	36.05	36.07	36	35.83		35.7		35.92	35.94		35.4	
1990	35.39	35.31	35.17	35.07	34.91	34.87	34.81	34.73	34.71		35.16		35.032
1991	35.17	35.08	34.87	34.67	34.61	34.64	34.68	34.69	34.81	34.89	35.1		34.867
1992	35.27	35.3	35.19	35.09	34.95	35.12	35.47	35.72	43.01	42103	99.1	39.6	19001