



ING. JOSE SANTOS ESCAMILLA LOPEZ

**ESTUDIO PARA LA IDENTIFICACION DE PERDIDAS FISICAS Y
MEDICION EN EL ACUEDUCTO CEDRAL - MATEHUALA**

**Servicio de Agua Potable, Alcantarillado y Saneamiento de
Matehuala, S.L.P.**

FICHAS TECNICAS:

DUCTOS, POZOS Y TANQUES

CONTRATO. No. SAPSAM-AD-SROB-025-2019

ENERO DEL 2020

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL - MATEHUALA
 MATEHUALA Bust Cir



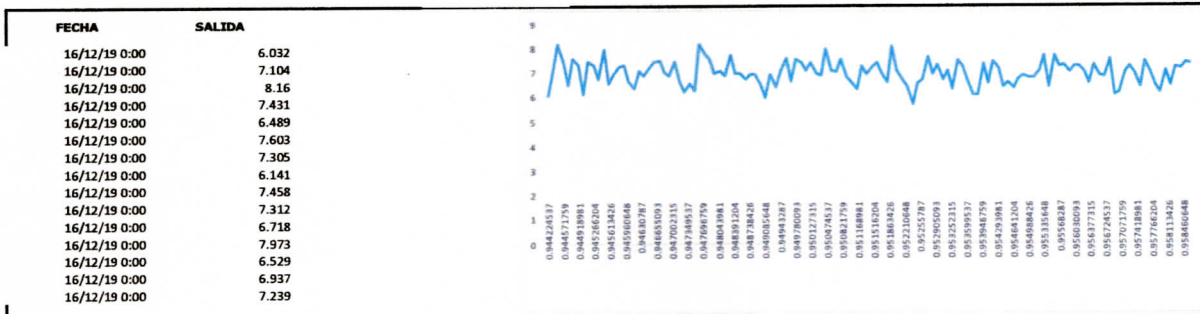
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FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES
Proyecto:

No. Sitio:	Bust Cir	Fuente de Abastecimiento:	
Sector:		Fecha de inicio de Registro:	
Calle:		Fecha de fin de registro:	
Colonia:		Hora:	

GPS:	Latitud	Longitud	Altitud:	MSNM
Tiempo de Op.	60 min	Estiaje:	Tiempo sin Operación:	
Tipo:	MEDIDOR			
Caudal Puntual:	Caudalimetro por ultrasonico	Modelo	Portaflow X	No. Serie
	LPS	No. De Medidor Ultrasonico	S/M	S10A2-00Y
				Modelo

GRÁFICA DE CAUDAL



Fotografía del macro medidor	Fotografía del medidor ultrasonico
No cuenta con macro medidor	

Referencias del sitio de Medición:

Observaciones:

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA



Bust_Cir

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4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
16/12/2019 00:00	22:39:41	0.177	6.032	0
16/12/2019 00:00	22:39:51	0.209	7.104	0
16/12/2019 00:00	22:40:01	0.24	8.16	0.1
16/12/2019 00:00	22:40:11	0.218	7.431	0.2
16/12/2019 00:00	22:40:21	0.19	6.489	0.3
16/12/2019 00:00	22:40:31	0.223	7.603	0.3
16/12/2019 00:00	22:40:41	0.215	7.305	0.4
16/12/2019 00:00	22:40:51	0.18	6.141	0.5
16/12/2019 00:00	22:41:01	0.219	7.458	0.5
16/12/2019 00:00	22:41:11	0.215	7.312	0.6
16/12/2019 00:00	22:41:21	0.197	6.718	0.7
16/12/2019 00:00	22:41:31	0.234	7.973	0.8
16/12/2019 00:00	22:41:41	0.192	6.529	0.8
16/12/2019 00:00	22:41:51	0.204	6.937	0.9
16/12/2019 00:00	22:42:01	0.213	7.239	1
16/12/2019 00:00	22:42:11	0.214	7.287	1
16/12/2019 00:00	22:42:21	0.196	6.66	1.1
16/12/2019 00:00	22:42:31	0.186	6.351	1.2
16/12/2019 00:00	22:42:41	0.208	7.086	1.3
16/12/2019 00:00	22:42:51	0.202	6.865	1.3
16/12/2019 00:00	22:43:01	0.211	7.197	1.4
16/12/2019 00:00	22:43:11	0.218	7.426	1.5
16/12/2019 00:00	22:43:21	0.221	7.509	1.5
16/12/2019 00:00	22:43:31	0.206	7.027	1.6
16/12/2019 00:00	22:43:41	0.201	6.862	1.7
16/12/2019 00:00	22:43:51	0.219	7.456	1.8
16/12/2019 00:00	22:44:01	0.195	6.659	1.8
16/12/2019 00:00	22:44:11	0.183	6.221	1.9
16/12/2019 00:00	22:44:21	0.193	6.565	2
16/12/2019 00:00	22:44:31	0.184	6.285	2
16/12/2019 00:00	22:44:41	0.24	8.16	2.1
16/12/2019 00:00	22:44:51	0.228	7.776	2.2
16/12/2019 00:00	22:45:01	0.222	7.554	2.2
16/12/2019 00:00	22:45:11	0.204	6.96	2.3
16/12/2019 00:00	22:45:21	0.208	7.07	2.4
16/12/2019 00:00	22:45:31	0.201	6.856	2.5
16/12/2019 00:00	22:45:41	0.227	7.737	2.5
16/12/2019 00:00	22:45:51	0.205	6.99	2.6
16/12/2019 00:00	22:46:01	0.204	6.956	2.7

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
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16/12/2019 00:00	22:46:11	0.198	6.74	2.7
16/12/2019 00:00	22:46:21	0.204	6.937	2.8
16/12/2019 00:00	22:46:31	0.203	6.913	2.9
16/12/2019 00:00	22:46:41	0.191	6.494	3
16/12/2019 00:00	22:46:51	0.176	6	3
16/12/2019 00:00	22:47:01	0.203	6.912	3.1
16/12/2019 00:00	22:47:11	0.188	6.399	3.2
16/12/2019 00:00	22:47:21	0.207	7.049	3.2
16/12/2019 00:00	22:47:31	0.222	7.566	3.3
16/12/2019 00:00	22:47:41	0.195	6.653	3.4
16/12/2019 00:00	22:47:51	0.221	7.532	3.4
16/12/2019 00:00	22:48:01	0.218	7.416	3.5
16/12/2019 00:00	22:48:11	0.208	7.076	3.6
16/12/2019 00:00	22:48:21	0.217	7.397	3.7
16/12/2019 00:00	22:48:31	0.205	6.971	3.7
16/12/2019 00:00	22:48:41	0.202	6.87	3.8
16/12/2019 00:00	22:48:51	0.234	7.952	3.9
16/12/2019 00:00	22:49:01	0.207	7.051	3.9
16/12/2019 00:00	22:49:11	0.206	7.013	4
16/12/2019 00:00	22:49:21	0.221	7.539	4.1
16/12/2019 00:00	22:49:31	0.201	6.848	4.2
16/12/2019 00:00	22:49:41	0.194	6.599	4.2
16/12/2019 00:00	22:49:51	0.185	6.291	4.3
16/12/2019 00:00	22:50:01	0.213	7.244	4.4
16/12/2019 00:00	22:50:11	0.204	6.938	4.4
16/12/2019 00:00	22:50:21	0.212	7.229	4.5
16/12/2019 00:00	22:50:31	0.218	7.419	4.6
16/12/2019 00:00	22:50:41	0.205	6.986	4.6
16/12/2019 00:00	22:50:51	0.194	6.615	4.7
16/12/2019 00:00	22:51:01	0.237	8.066	4.8
16/12/2019 00:00	22:51:11	0.207	7.058	4.9
16/12/2019 00:00	22:51:21	0.197	6.713	4.9
16/12/2019 00:00	22:51:31	0.187	6.387	5
16/12/2019 00:00	22:51:41	0.167	5.697	5.1
16/12/2019 00:00	22:51:51	0.192	6.531	5.1
16/12/2019 00:00	22:52:01	0.196	6.684	5.2
16/12/2019 00:00	22:52:11	0.223	7.61	5.3
16/12/2019 00:00	22:52:21	0.203	6.929	5.3
16/12/2019 00:00	22:52:31	0.214	7.292	5.4
16/12/2019 00:00	22:52:41	0.197	6.71	5.5
16/12/2019 00:00	22:52:51	0.207	7.063	5.5

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA



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16/12/2019 00:00	22:53:01	0.186	6.326	5.6
16/12/2019 00:00	22:53:11	0.22	7.487	5.7
16/12/2019 00:00	22:53:21	0.213	7.244	5.7
16/12/2019 00:00	22:53:31	0.196	6.691	5.8
16/12/2019 00:00	22:53:41	0.178	6.077	5.9
16/12/2019 00:00	22:53:51	0.178	6.067	5.9
16/12/2019 00:00	22:54:01	0.216	7.368	6
16/12/2019 00:00	22:54:11	0.192	6.551	6.1
16/12/2019 00:00	22:54:21	0.219	7.461	6.2
16/12/2019 00:00	22:54:31	0.211	7.177	6.2
16/12/2019 00:00	22:54:41	0.188	6.402	6.3
16/12/2019 00:00	22:54:51	0.193	6.579	6.4
16/12/2019 00:00	22:55:01	0.187	6.359	6.4
16/12/2019 00:00	22:55:11	0.197	6.717	6.5
16/12/2019 00:00	22:55:21	0.202	6.896	6.6
16/12/2019 00:00	22:55:31	0.199	6.79	6.6
16/12/2019 00:00	22:55:41	0.2	6.796	6.7
16/12/2019 00:00	22:55:51	0.207	7.064	6.8
16/12/2019 00:00	22:56:01	0.226	7.686	6.8
16/12/2019 00:00	22:56:11	0.188	6.39	6.9
16/12/2019 00:00	22:56:21	0.226	7.7	7
16/12/2019 00:00	22:56:31	0.213	7.267	7.1
16/12/2019 00:00	22:56:41	0.214	7.283	7.1
16/12/2019 00:00	22:56:51	0.206	7.006	7.2
16/12/2019 00:00	22:57:01	0.213	7.26	7.3
16/12/2019 00:00	22:57:11	0.213	7.263	7.4
16/12/2019 00:00	22:57:21	0.205	6.997	7.4
16/12/2019 00:00	22:57:31	0.192	6.534	7.5
16/12/2019 00:00	22:57:41	0.215	7.321	7.6
16/12/2019 00:00	22:57:51	0.202	6.889	7.6
16/12/2019 00:00	22:58:01	0.201	6.844	7.7
16/12/2019 00:00	22:58:11	0.221	7.525	7.8
16/12/2019 00:00	22:58:21	0.179	6.092	7.8
16/12/2019 00:00	22:58:31	0.182	6.191	7.9
16/12/2019 00:00	22:58:41	0.206	7.012	8
16/12/2019 00:00	22:58:51	0.213	7.268	8
16/12/2019 00:00	22:59:01	0.205	6.995	8.1
16/12/2019 00:00	22:59:11	0.187	6.386	8.2
16/12/2019 00:00	22:59:21	0.219	7.459	8.2
16/12/2019 00:00	22:59:31	0.207	7.053	8.3
16/12/2019 00:00	22:59:41	0.19	6.468	8.4

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Bust_Cir



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16/12/2019 00:00	22:59:51	0.181	6.167	8.4
16/12/2019 00:00	23:00:01	0.207	7.058	8.5
16/12/2019 00:00	23:00:11	0.189	6.45	8.6
16/12/2019 00:00	23:00:21	0.211	7.191	8.7
16/12/2019 00:00	23:00:31	0.21	7.142	8.7
16/12/2019 00:00	23:00:41	0.218	7.408	8.8
16/12/2019 00:00	23:00:51	0.216	7.345	8.9

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL - MATEHUALA
MATEHUALA Bust Cir



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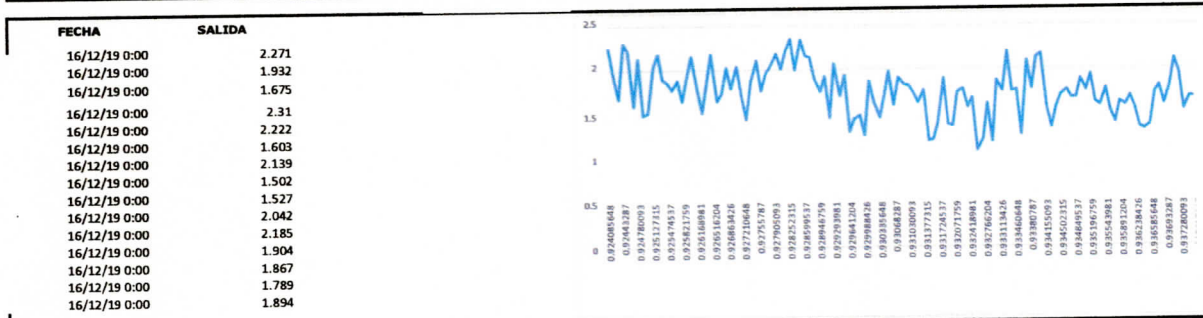


IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL - MATEHUALA
MATEHUALA Bust Cuadrado



FICHA TÉCNICA PARA MEDICIÓN INSTANTÁNEA DE CAUDALES			
Proyecto: Bust Cuadrado			
No. Sitio:	Bust Cuadrado	Fuente de Abastecimiento:	16 Dic 2019
Sector:		Fecha de Inicio de Registro:	16 Dic 2019
Calle:		Fecha de fin de registro:	22:10
Colonia:		Hora:	
GPS:	Latitud	Longitud	Altitud: MSNM
Tiempo de Op.	60 min	Estiaje:	Tiempo sin Operación:
MEDIDOR			
Tipo:	Caudalímetro por ultrasonico	Modelo	Portaflow X
Caudal Puntual:	1.76 LPS	No. De Medidor Ultrasonico	No. Serie S10A2-00Y
			S/M Modelo

GRÁFICA DE CAUDAL



Fotografía del macro medidor

No cuenta con macro medidor

Fotografía del medidor ultrasonico



Referencias del sitio de Medición:

Observaciones:

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 Bust_Cud



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4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
16/12/2019 00:00	22:10:41	0.121	2.271	0
16/12/2019 00:00	22:10:51	0.103	1.932	0
16/12/2019 00:00	22:11:01	0.089	1.675	0
16/12/2019 00:00	22:11:11	0.123	2.31	0.1
16/12/2019 00:00	22:11:21	0.118	2.222	0.1
16/12/2019 00:00	22:11:31	0.085	1.603	0.1
16/12/2019 00:00	22:11:41	0.114	2.139	0.1
16/12/2019 00:00	22:11:51	0.08	1.502	0.1
16/12/2019 00:00	22:12:01	0.081	1.527	0.2
16/12/2019 00:00	22:12:11	0.108	2.042	0.2
16/12/2019 00:00	22:12:21	0.116	2.185	0.2
16/12/2019 00:00	22:12:31	0.101	1.904	0.2
16/12/2019 00:00	22:12:41	0.099	1.867	0.2
16/12/2019 00:00	22:12:51	0.095	1.789	0.2
16/12/2019 00:00	22:13:01	0.101	1.894	0.3
16/12/2019 00:00	22:13:11	0.087	1.648	0.3
16/12/2019 00:00	22:13:21	0.102	1.916	0.3
16/12/2019 00:00	22:13:31	0.115	2.161	0.3
16/12/2019 00:00	22:13:41	0.095	1.798	0.3
16/12/2019 00:00	22:13:51	0.081	1.52	0.4
16/12/2019 00:00	22:14:01	0.098	1.847	0.4
16/12/2019 00:00	22:14:11	0.116	2.186	0.4
16/12/2019 00:00	22:14:21	0.088	1.655	0.4
16/12/2019 00:00	22:14:31	0.093	1.747	0.4
16/12/2019 00:00	22:14:41	0.108	2.031	0.4
16/12/2019 00:00	22:14:51	0.096	1.802	0.5
16/12/2019 00:00	22:15:01	0.109	2.047	0.5
16/12/2019 00:00	22:15:11	0.091	1.708	0.5
16/12/2019 00:00	22:15:21	0.077	1.444	0.5
16/12/2019 00:00	22:15:31	0.1	1.88	0.5
16/12/2019 00:00	22:15:41	0.112	2.111	0.6
16/12/2019 00:00	22:15:51	0.094	1.776	0.6
16/12/2019 00:00	22:16:01	0.104	1.96	0.6
16/12/2019 00:00	22:16:11	0.108	2.042	0.6
16/12/2019 00:00	22:16:21	0.116	2.192	0.6
16/12/2019 00:00	22:16:31	0.107	2.012	0.7
16/12/2019 00:00	22:16:41	0.118	2.213	0.7
16/12/2019 00:00	22:16:51	0.125	2.351	0.7
16/12/2019 00:00	22:17:01	0.106	2.005	0.7

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 Bust_Cud



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16/12/2019 00:00	22:17:11	0.125	2.344	0.7
16/12/2019 00:00	22:17:21	0.114	2.155	0.8
16/12/2019 00:00	22:17:31	0.114	2.154	0.8
16/12/2019 00:00	22:17:41	0.101	1.898	0.8
16/12/2019 00:00	22:17:51	0.094	1.764	0.8
16/12/2019 00:00	22:18:01	0.103	1.932	0.8
16/12/2019 00:00	22:18:11	0.077	1.458	0.9
16/12/2019 00:00	22:18:21	0.11	2.067	0.9
16/12/2019 00:00	22:18:31	0.091	1.711	0.9
16/12/2019 00:00	22:18:41	0.103	1.946	0.9
16/12/2019 00:00	22:18:51	0.069	1.302	0.9
16/12/2019 00:00	22:19:01	0.077	1.447	0.9
16/12/2019 00:00	22:19:11	0.079	1.488	1
16/12/2019 00:00	22:19:21	0.067	1.264	1
16/12/2019 00:00	22:19:31	0.1	1.88	1
16/12/2019 00:00	22:19:41	0.086	1.622	1
16/12/2019 00:00	22:19:51	0.078	1.462	1
16/12/2019 00:00	22:20:01	0.091	1.706	1
16/12/2019 00:00	22:20:11	0.105	1.982	1
16/12/2019 00:00	22:20:21	0.085	1.602	1.1
16/12/2019 00:00	22:20:31	0.102	1.914	1.1
16/12/2019 00:00	22:20:41	0.097	1.83	1.1
16/12/2019 00:00	22:20:51	0.097	1.822	1.1
16/12/2019 00:00	22:21:01	0.093	1.75	1.1
16/12/2019 00:00	22:21:11	0.086	1.621	1.2
16/12/2019 00:00	22:21:21	0.094	1.767	1.2
16/12/2019 00:00	22:21:31	0.063	1.192	1.2
16/12/2019 00:00	22:21:41	0.064	1.209	1.2
16/12/2019 00:00	22:21:51	0.074	1.398	1.2
16/12/2019 00:00	22:22:01	0.101	1.899	1.2
16/12/2019 00:00	22:22:11	0.073	1.382	1.3
16/12/2019 00:00	22:22:21	0.073	1.372	1.3
16/12/2019 00:00	22:22:31	0.093	1.749	1.3
16/12/2019 00:00	22:22:41	0.095	1.786	1.3
16/12/2019 00:00	22:22:51	0.084	1.575	1.3
16/12/2019 00:00	22:23:01	0.089	1.68	1.3
16/12/2019 00:00	22:23:11	0.057	1.084	1.4
16/12/2019 00:00	22:23:21	0.064	1.211	1.4
16/12/2019 00:00	22:23:31	0.086	1.613	1.4
16/12/2019 00:00	22:23:41	0.062	1.179	1.4
16/12/2019 00:00	22:23:51	0.1	1.876	1.4

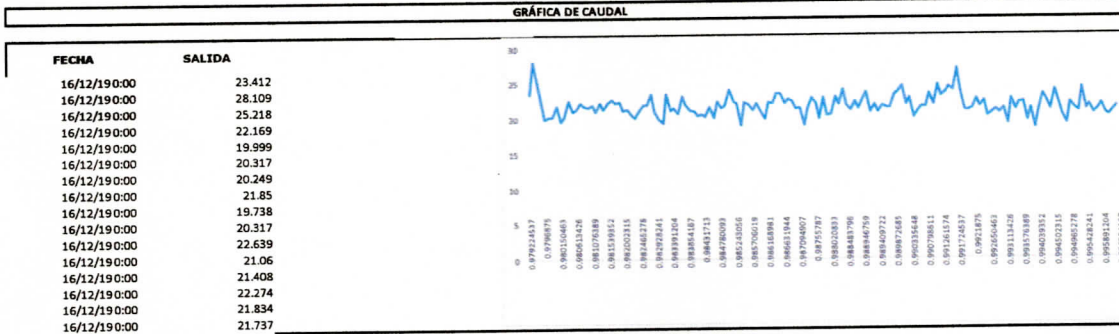
IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 Bust_Cud



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16/12/2019 00:00	22:24:01	0.093	1.76	1.4
16/12/2019 00:00	22:24:11	0.117	2.204	1.4
16/12/2019 00:00	22:24:21	0.093	1.755	1.5
16/12/2019 00:00	22:24:31	0.094	1.776	1.5
16/12/2019 00:00	22:24:41	0.067	1.267	1.5
16/12/2019 00:00	22:24:51	0.111	2.097	1.5
16/12/2019 00:00	22:25:01	0.095	1.785	1.5
16/12/2019 00:00	22:25:11	0.114	2.139	1.6
16/12/2019 00:00	22:25:21	0.116	2.18	1.6
16/12/2019 00:00	22:25:31	0.083	1.568	1.6
16/12/2019 00:00	22:25:41	0.071	1.335	1.6
16/12/2019 00:00	22:25:51	0.084	1.579	1.6
16/12/2019 00:00	22:26:01	0.091	1.711	1.6
16/12/2019 00:00	22:26:11	0.094	1.769	1.7
16/12/2019 00:00	22:26:21	0.089	1.682	1.7
16/12/2019 00:00	22:26:31	0.089	1.676	1.7
16/12/2019 00:00	22:26:41	0.1	1.882	1.7
16/12/2019 00:00	22:26:51	0.093	1.752	1.7
16/12/2019 00:00	22:27:01	0.103	1.937	1.7
16/12/2019 00:00	22:27:11	0.086	1.629	1.8
16/12/2019 00:00	22:27:21	0.084	1.586	1.8
16/12/2019 00:00	22:27:31	0.095	1.782	1.8
16/12/2019 00:00	22:27:41	0.081	1.529	1.8
16/12/2019 00:00	22:27:51	0.074	1.395	1.8
16/12/2019 00:00	22:28:01	0.086	1.63	1.8
16/12/2019 00:00	22:28:11	0.085	1.594	1.9
16/12/2019 00:00	22:28:21	0.09	1.69	1.9
16/12/2019 00:00	22:28:31	0.083	1.565	1.9
16/12/2019 00:00	22:28:41	0.071	1.343	1.9
16/12/2019 00:00	22:28:51	0.07	1.319	1.9
16/12/2019 00:00	22:29:01	0.072	1.368	1.9
16/12/2019 00:00	22:29:11	0.092	1.737	2
16/12/2019 00:00	22:29:21	0.096	1.804	2
16/12/2019 00:00	22:29:31	0.085	1.605	2
16/12/2019 00:00	22:29:41	0.096	1.809	2
16/12/2019 00:00	22:29:51	0.112	2.113	2
16/12/2019 00:00	22:30:01	0.104	1.957	2
16/12/2019 00:00	22:30:11	0.082	1.541	2.1
16/12/2019 00:00	22:30:21	0.089	1.674	2.1
16/12/2019 00:00	22:30:31	0.089	1.679	2.1

FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES				
Proyecto:				
No. Sitio:	Pila Calera		Fuente de Abastecimiento:	
Sector:			Fecha de Inicio de Registro:	16 Dic 2019
Calle:			Fecha de fin de registro:	16 Dic 2019
Colonia:			Hora:	11:55
GPS:	Latitud	Longitud	Altitud:	MSNM
Tiempo de Op.	60 min	Estiaje:	Tiempo sin Operación:	
MEDIDOR				
Tipo:	Caudalimetro por ultrasonico	Modelo	Portaflo w X	No. Serie
Caudal Puntual:	21.83 LPS	No. De Medidor Ultrasonico	S/M	Modelo



Referencias del sitio de Medición:

Observaciones:

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
Pila Calera



ING. JOSE SANTOS ESCAMILLA LOPEZ

4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
16/12/2019 00:00	23:30:05	0.253	23.412	0.8
16/12/2019 00:00	23:30:15	0.304	28.109	1
16/12/2019 00:00	23:30:25	0.273	25.218	1.3
16/12/2019 00:00	23:30:35	0.24	22.169	1.5
16/12/2019 00:00	23:30:45	0.216	19.999	1.7
16/12/2019 00:00	23:30:55	0.22	20.317	1.9
16/12/2019 00:00	23:31:05	0.219	20.249	2.1
16/12/2019 00:00	23:31:15	0.237	21.85	2.3
16/12/2019 00:00	23:31:25	0.214	19.738	2.5
16/12/2019 00:00	23:31:35	0.22	20.317	2.7
16/12/2019 00:00	23:31:45	0.245	22.639	2.9
16/12/2019 00:00	23:31:55	0.228	21.06	3.2
16/12/2019 00:00	23:32:05	0.232	21.408	3.4
16/12/2019 00:00	23:32:15	0.241	22.274	3.6
16/12/2019 00:00	23:32:25	0.236	21.834	3.8
16/12/2019 00:00	23:32:35	0.235	21.737	4
16/12/2019 00:00	23:32:45	0.239	22.062	4.3
16/12/2019 00:00	23:32:55	0.229	21.128	4.5
16/12/2019 00:00	23:33:05	0.241	22.307	4.7
16/12/2019 00:00	23:33:15	0.231	21.311	4.9
16/12/2019 00:00	23:33:25	0.242	22.347	5.1
16/12/2019 00:00	23:33:35	0.247	22.77	5.4
16/12/2019 00:00	23:33:45	0.242	22.315	5.6
16/12/2019 00:00	23:33:55	0.243	22.432	5.8
16/12/2019 00:00	23:34:05	0.23	21.266	6
16/12/2019 00:00	23:34:15	0.231	21.331	6.2
16/12/2019 00:00	23:34:25	0.223	20.616	6.4
16/12/2019 00:00	23:34:35	0.219	20.206	6.6
16/12/2019 00:00	23:34:45	0.23	21.242	6.9
16/12/2019 00:00	23:34:55	0.238	21.992	7.1
16/12/2019 00:00	23:35:05	0.238	22.029	7.3
16/12/2019 00:00	23:35:15	0.255	23.552	7.5
16/12/2019 00:00	23:35:25	0.229	21.116	7.7
16/12/2019 00:00	23:35:35	0.217	20.052	7.9
16/12/2019 00:00	23:35:45	0.21	19.432	8.1
16/12/2019 00:00	23:35:55	0.256	23.605	8.4
16/12/2019 00:00	23:36:05	0.23	21.219	8.6

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA



Pila Calera

ING. JOSE SANTOS ESCAMILLA LOPEZ

16/12/2019 00:00	23:36:15	0.234	21.589	8.8
16/12/2019 00:00	23:36:25	0.225	20.796	9
16/12/2019 00:00	23:36:35	0.251	23.222	9.2
16/12/2019 00:00	23:36:45	0.238	22.03	9.4
16/12/2019 00:00	23:36:55	0.229	21.151	9.6
16/12/2019 00:00	23:37:05	0.228	21.071	9.9
16/12/2019 00:00	23:37:15	0.221	20.43	10.1
16/12/2019 00:00	23:37:25	0.223	20.645	10.3
16/12/2019 00:00	23:37:35	0.22	20.284	10.5
16/12/2019 00:00	23:37:45	0.235	21.754	10.7
16/12/2019 00:00	23:37:55	0.218	20.183	10.9
16/12/2019 00:00	23:38:05	0.242	22.385	11.1
16/12/2019 00:00	23:38:15	0.233	21.565	11.4
16/12/2019 00:00	23:38:25	0.237	21.896	11.6
16/12/2019 00:00	23:38:35	0.262	24.176	11.8
16/12/2019 00:00	23:38:45	0.244	22.527	12
16/12/2019 00:00	23:38:55	0.24	22.196	12.2
16/12/2019 00:00	23:39:05	0.206	19.059	12.4
16/12/2019 00:00	23:39:15	0.242	22.334	12.7
16/12/2019 00:00	23:39:25	0.238	22.013	12.9
16/12/2019 00:00	23:39:35	0.23	21.28	13.1
16/12/2019 00:00	23:39:45	0.24	22.183	13.3
16/12/2019 00:00	23:39:55	0.228	21.04	13.5
16/12/2019 00:00	23:40:05	0.217	20.015	13.7
16/12/2019 00:00	23:40:15	0.241	22.252	13.9
16/12/2019 00:00	23:40:25	0.24	22.177	14.2
16/12/2019 00:00	23:40:35	0.254	23.497	14.4
16/12/2019 00:00	23:40:45	0.255	23.555	14.6
16/12/2019 00:00	23:40:55	0.241	22.227	14.8
16/12/2019 00:00	23:41:05	0.246	22.708	15.1
16/12/2019 00:00	23:41:15	0.243	22.441	15.3
16/12/2019 00:00	23:41:25	0.231	21.361	15.5
16/12/2019 00:00	23:41:35	0.232	21.46	15.7
16/12/2019 00:00	23:41:45	0.206	19.02	15.9
16/12/2019 00:00	23:41:55	0.231	21.339	16.1
16/12/2019 00:00	23:42:05	0.248	22.922	16.4
16/12/2019 00:00	23:42:15	0.239	22.092	16.6
16/12/2019 00:00	23:42:25	0.216	19.954	16.8
16/12/2019 00:00	23:42:35	0.248	22.876	17
16/12/2019 00:00	23:42:45	0.221	20.409	17.2

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
Pila Calera



ING. JOSE SANTOS ESCAMILLA LOPEZ

16/12/2019 00:00	23:42:55	0.223	20.559	17.4
16/12/2019 00:00	23:43:05	0.251	23.14	17.7
16/12/2019 00:00	23:43:15	0.237	21.928	17.9
16/12/2019 00:00	23:43:25	0.261	24.151	18.1
16/12/2019 00:00	23:43:35	0.237	21.886	18.3
16/12/2019 00:00	23:43:45	0.23	21.28	18.5
16/12/2019 00:00	23:43:55	0.243	22.419	18.8
16/12/2019 00:00	23:44:05	0.231	21.374	19
16/12/2019 00:00	23:44:15	0.247	22.815	19.2
16/12/2019 00:00	23:44:25	0.256	23.687	19.4
16/12/2019 00:00	23:44:35	0.226	20.908	19.7
16/12/2019 00:00	23:44:45	0.238	21.953	19.9
16/12/2019 00:00	23:44:55	0.226	20.863	20.1
16/12/2019 00:00	23:45:05	0.236	21.772	20.3
16/12/2019 00:00	23:45:15	0.233	21.49	20.5
16/12/2019 00:00	23:45:25	0.233	21.513	20.7
16/12/2019 00:00	23:45:35	0.254	23.455	20.9
16/12/2019 00:00	23:45:45	0.257	23.702	21.2
16/12/2019 00:00	23:45:55	0.266	24.547	21.4
16/12/2019 00:00	23:46:05	0.237	21.937	21.6
16/12/2019 00:00	23:46:15	0.247	22.856	21.9
16/12/2019 00:00	23:46:25	0.218	20.185	22.1
16/12/2019 00:00	23:46:35	0.226	20.868	22.3
16/12/2019 00:00	23:46:45	0.235	21.693	22.5
16/12/2019 00:00	23:46:55	0.235	21.754	22.7
16/12/2019 00:00	23:47:05	0.254	23.462	23
16/12/2019 00:00	23:47:15	0.239	22.065	23.2
16/12/2019 00:00	23:47:25	0.268	24.781	23.4
16/12/2019 00:00	23:47:35	0.252	23.231	23.7
16/12/2019 00:00	23:47:45	0.256	23.682	23.9
16/12/2019 00:00	23:47:55	0.265	24.516	24.1
16/12/2019 00:00	23:48:05	0.26	23.995	24.4
16/12/2019 00:00	23:48:15	0.293	27.074	24.6
16/12/2019 00:00	23:48:25	0.259	23.94	24.9
16/12/2019 00:00	23:48:35	0.23	21.22	25.1
16/12/2019 00:00	23:48:45	0.229	21.123	25.3
16/12/2019 00:00	23:48:55	0.231	21.384	25.5
16/12/2019 00:00	23:49:05	0.247	22.825	25.7
16/12/2019 00:00	23:49:15	0.234	21.619	26
16/12/2019 00:00	23:49:25	0.243	22.456	26.2

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA



Pila Calera

ING. JOSE SANTOS ESCAMILLA LOPEZ

16/12/2019 00:00	23:49:35	0.219	20.256	26.4
16/12/2019 00:00	23:49:45	0.226	20.84	26.6
16/12/2019 00:00	23:49:55	0.229	21.153	26.8
16/12/2019 00:00	23:50:05	0.224	20.71	27
16/12/2019 00:00	23:50:15	0.232	21.449	27.3
16/12/2019 00:00	23:50:25	0.208	19.223	27.5
16/12/2019 00:00	23:50:35	0.247	22.787	27.7
16/12/2019 00:00	23:50:45	0.229	21.163	27.9
16/12/2019 00:00	23:50:55	0.241	22.218	28.1
16/12/2019 00:00	23:51:05	0.242	22.365	28.3
16/12/2019 00:00	23:51:15	0.213	19.683	28.5
16/12/2019 00:00	23:51:25	0.231	21.329	28.7
16/12/2019 00:00	23:51:35	0.201	18.61	28.9
16/12/2019 00:00	23:51:45	0.227	21.011	29.1
16/12/2019 00:00	23:51:55	0.253	23.346	29.3
16/12/2019 00:00	23:52:05	0.241	22.295	29.6
16/12/2019 00:00	23:52:15	0.23	21.288	29.8
16/12/2019 00:00	23:52:25	0.261	24.072	30
16/12/2019 00:00	23:52:35	0.236	21.839	30.3
16/12/2019 00:00	23:52:45	0.222	20.492	30.5
16/12/2019 00:00	23:52:55	0.209	19.277	30.7
16/12/2019 00:00	23:53:05	0.241	22.22	30.9
16/12/2019 00:00	23:53:15	0.231	21.365	31.1
16/12/2019 00:00	23:53:25	0.226	20.904	31.3
16/12/2019 00:00	23:53:35	0.263	24.326	31.6
16/12/2019 00:00	23:53:45	0.229	21.198	31.8
16/12/2019 00:00	23:53:55	0.236	21.771	32
16/12/2019 00:00	23:54:05	0.223	20.64	32.2
16/12/2019 00:00	23:54:15	0.23	21.255	32.4
16/12/2019 00:00	23:54:25	0.238	21.991	32.6
16/12/2019 00:00	23:54:35	0.224	20.672	32.8
16/12/2019 00:00	23:54:45	0.22	20.303	33.1
16/12/2019 00:00	23:54:55	0.227	21.009	33.3
16/12/2019 00:00	23:55:05	0.234	21.658	33.5



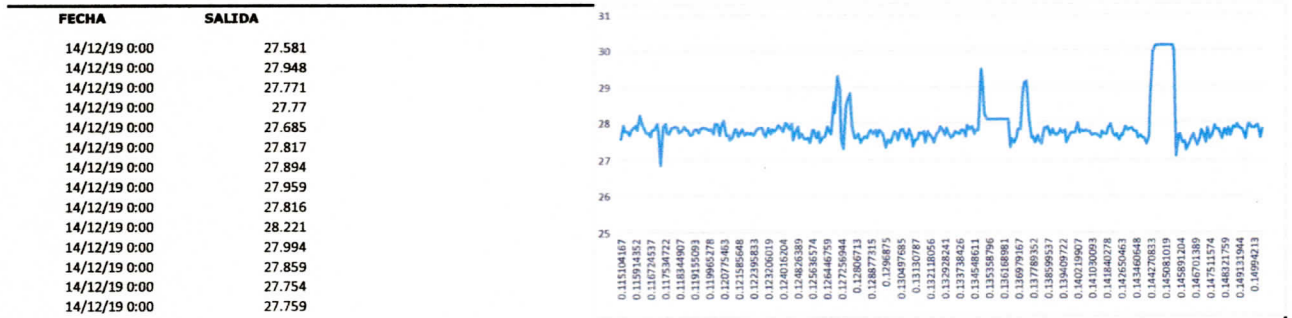


**IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
MATEHUALA POZO 4**

FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES			
Proyecto:			
No. Sitio:	Pozo 4	Fuente de Abastecimiento:	
Sector:		Fecha de Inicio de Registro:	14 de Dic 2019
Calle:		Fecha de fin de registro:	14 de Dic 2019
Colonia:		Hora:	2:45pm
GPS:	Latitud 23°52'42.10"N 60 min Estiaje:	Longitud 100°49'35.20"W	Altitud: 1738 MSNM

Tiempo de Op.	Tiempo en Operación:
MEDIDOR	
Tipo: Caudalimetro por ultrasonico	Modelo: Portaflow X No. Serie: S10A2-00Y
Caudal Puntual: 27.88 LPS	No. De Medicor Ultrasonico: S/M Modelo:

GRÁFICA DE CAUDAL



Fotografía del macro medidor	Fotografía del medidor ultrasonico
	
Referencias del sitio de Medición:	
Observaciones:	

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 4



ING. JOSE SANTOS ESCAMILLA LOPEZ

4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
14/12/2019 00:00	02:45:45	1.516	27.581	20.8
14/12/2019 00:00	02:45:55	1.536	27.948	21
14/12/2019 00:00	02:46:05	1.526	27.771	21.3
14/12/2019 00:00	02:46:15	1.526	27.77	0
14/12/2019 00:00	02:46:25	1.522	27.685	0.3
14/12/2019 00:00	02:46:35	1.529	27.817	0.6
14/12/2019 00:00	02:46:45	1.533	27.894	0.9
14/12/2019 00:00	02:46:55	1.537	27.959	1.2
14/12/2019 00:00	02:47:05	1.529	27.816	1.4
14/12/2019 00:00	02:47:15	1.551	28.221	1.7
14/12/2019 00:00	02:47:25	1.539	27.994	2
14/12/2019 00:00	02:47:35	1.531	27.859	2.3
14/12/2019 00:00	02:47:45	1.525	27.754	2.6
14/12/2019 00:00	02:47:55	1.526	27.759	2.8
14/12/2019 00:00	02:48:05	1.52	27.652	3.1
14/12/2019 00:00	02:48:15	1.528	27.799	3.4
14/12/2019 00:00	02:48:25	1.53	27.841	3.7
14/12/2019 00:00	02:48:35	1.538	27.983	3.9
14/12/2019 00:00	02:48:45	1.527	27.776	4.2
14/12/2019 00:00	02:48:55	1.476	26.853	4.5
14/12/2019 00:00	02:49:05	1.534	27.917	4.8
14/12/2019 00:00	02:49:15	1.539	27.995	5
14/12/2019 00:00	02:49:25	1.525	27.743	5.3
14/12/2019 00:00	02:49:35	1.524	27.723	5.6
14/12/2019 00:00	02:49:45	1.532	27.866	5.9
14/12/2019 00:00	02:49:55	1.533	27.886	6.2
14/12/2019 00:00	02:50:05	1.535	27.926	6.4
14/12/2019 00:00	02:50:15	1.532	27.877	6.7
14/12/2019 00:00	02:50:25	1.524	27.735	7
14/12/2019 00:00	02:50:35	1.526	27.773	7.3
14/12/2019 00:00	02:50:45	1.534	27.905	7.5
14/12/2019 00:00	02:50:55	1.528	27.802	7.8
14/12/2019 00:00	02:51:05	1.529	27.823	8.1
14/12/2019 00:00	02:51:15	1.521	27.67	8.4
14/12/2019 00:00	02:51:25	1.524	27.719	8.7
14/12/2019 00:00	02:51:35	1.529	27.813	8.9
14/12/2019 00:00	02:51:45	1.53	27.837	9.2
14/12/2019 00:00	02:51:55	1.526	27.76	9.5
14/12/2019 00:00	02:52:05	1.531	27.855	9.8

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO 4



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	02:52:15	1.532	27.868	10
14/12/2019 00:00	02:52:25	1.532	27.882	10.3
14/12/2019 00:00	02:52:35	1.531	27.851	10.6
14/12/2019 00:00	02:52:45	1.528	27.798	10.9
14/12/2019 00:00	02:52:55	1.531	27.86	11.2
14/12/2019 00:00	02:53:05	1.524	27.721	11.4
14/12/2019 00:00	02:53:15	1.538	27.991	11.7
14/12/2019 00:00	02:53:25	1.538	27.992	12
14/12/2019 00:00	02:53:35	1.521	27.668	12.3
14/12/2019 00:00	02:53:45	1.534	27.91	12.6
14/12/2019 00:00	02:53:55	1.543	28.068	12.8
14/12/2019 00:00	02:54:05	1.521	27.666	13.1
14/12/2019 00:00	02:54:15	1.521	27.677	13.4
14/12/2019 00:00	02:54:25	1.513	27.532	13.7
14/12/2019 00:00	02:54:35	1.518	27.623	13.9
14/12/2019 00:00	02:54:45	1.53	27.834	14.2
14/12/2019 00:00	02:54:55	1.531	27.862	14.5
14/12/2019 00:00	02:55:05	1.52	27.647	14.8
14/12/2019 00:00	02:55:15	1.527	27.789	15
14/12/2019 00:00	02:55:25	1.531	27.851	15.3
14/12/2019 00:00	02:55:35	1.521	27.677	15.6
14/12/2019 00:00	02:55:45	1.524	27.737	15.9
14/12/2019 00:00	02:55:55	1.522	27.695	16.2
14/12/2019 00:00	02:56:05	1.524	27.734	16.4
14/12/2019 00:00	02:56:15	1.52	27.661	16.7
14/12/2019 00:00	02:56:25	1.528	27.793	17
14/12/2019 00:00	02:56:35	1.531	27.862	17.3
14/12/2019 00:00	02:56:45	1.533	27.886	17.5
14/12/2019 00:00	02:56:55	1.533	27.893	17.8
14/12/2019 00:00	02:57:05	1.524	27.729	18.1
14/12/2019 00:00	02:57:15	1.52	27.654	18.4
14/12/2019 00:00	02:57:25	1.533	27.887	18.7
14/12/2019 00:00	02:57:35	1.523	27.718	18.9
14/12/2019 00:00	02:57:45	1.531	27.857	19.2
14/12/2019 00:00	02:57:55	1.526	27.768	19.5
14/12/2019 00:00	02:58:05	1.532	27.878	19.8
14/12/2019 00:00	02:58:15	1.536	27.95	20
14/12/2019 00:00	02:58:25	1.532	27.878	20.3
14/12/2019 00:00	02:58:35	1.526	27.769	20.6
14/12/2019 00:00	02:58:45	1.539	27.999	20.9
14/12/2019 00:00	02:58:55	1.538	27.985	21.2

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 4



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	02:59:05	1.534	27.837	21.4
14/12/2019 00:00	02:59:15	1.541	27.972	21.6
14/12/2019 00:00	02:59:25	1.517	27.524	21.9
14/12/2019 00:00	02:59:35	1.53	27.762	22.2
14/12/2019 00:00	02:59:45	1.539	27.921	22.5
14/12/2019 00:00	02:59:55	1.522	27.613	22.8
14/12/2019 00:00	03:00:05	1.527	27.702	23
14/12/2019 00:00	03:00:15	1.52	27.579	23.3
14/12/2019 00:00	03:00:25	1.52	27.582	23.6
14/12/2019 00:00	03:00:35	1.522	27.618	23.9
14/12/2019 00:00	03:00:45	1.514	27.471	24.1
14/12/2019 00:00	03:00:55	1.532	27.801	24.4
14/12/2019 00:00	03:01:05	1.533	27.819	24.7
14/12/2019 00:00	03:01:15	1.521	27.597	25
14/12/2019 00:00	03:01:25	1.531	27.791	25.2
14/12/2019 00:00	03:01:35	1.514	27.471	25.5
14/12/2019 00:00	03:01:45	1.522	27.611	25.8
14/12/2019 00:00	03:01:55	1.524	27.652	26.1
14/12/2019 00:00	03:02:05	1.538	27.903	26.4
14/12/2019 00:00	03:02:15	1.532	27.809	26.6
14/12/2019 00:00	03:02:25	1.528	27.727	26.9
14/12/2019 00:00	03:02:35	1.577	28.608	27.2
14/12/2019 00:00	03:02:45	1.558	28.281	27.5
14/12/2019 00:00	03:02:55	1.616	29.32	27.8
14/12/2019 00:00	03:03:05	1.595	28.938	28
14/12/2019 00:00	03:03:15	1.519	27.563	28.3
14/12/2019 00:00	03:03:25	1.505	27.311	28.6
14/12/2019 00:00	03:03:35	1.57	28.497	28.9
14/12/2019 00:00	03:03:45	1.584	28.743	29
14/12/2019 00:00	03:03:55	1.588	28.818	29.1
14/12/2019 00:00	03:04:05	1.538	27.91	29.4
14/12/2019 00:00	03:04:15	1.522	27.618	29.7
14/12/2019 00:00	03:04:25	1.521	27.604	30
14/12/2019 00:00	03:04:35	1.526	27.7	30.3
14/12/2019 00:00	03:04:45	1.515	27.486	30.5
14/12/2019 00:00	03:04:55	1.517	27.524	30.8
14/12/2019 00:00	03:05:05	1.522	27.627	31.1
14/12/2019 00:00	03:05:15	1.521	27.608	31.4
14/12/2019 00:00	03:05:25	1.532	27.792	31.6
14/12/2019 00:00	03:05:35	1.533	27.813	31.9
14/12/2019 00:00	03:05:45	1.527	27.714	32.2

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 4



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	03:05:55	1.533	27.814	32.5
14/12/2019 00:00	03:06:05	1.523	27.631	32.7
14/12/2019 00:00	03:06:15	1.533	27.811	33
14/12/2019 00:00	03:06:25	1.529	27.738	33.3
14/12/2019 00:00	03:06:35	1.524	27.662	33.6
14/12/2019 00:00	03:06:45	1.506	27.33	33.9
14/12/2019 00:00	03:06:55	1.518	27.546	34.1
14/12/2019 00:00	03:07:05	1.514	27.482	34.4
14/12/2019 00:00	03:07:15	1.519	27.568	34.7
14/12/2019 00:00	03:07:25	1.531	27.776	35
14/12/2019 00:00	03:07:35	1.527	27.719	35.2
14/12/2019 00:00	03:07:45	1.517	27.533	35.5
14/12/2019 00:00	03:07:55	1.533	27.817	35.8
14/12/2019 00:00	03:08:05	1.535	27.861	36.1
14/12/2019 00:00	03:08:15	1.529	27.748	36.3
14/12/2019 00:00	03:08:25	1.52	27.576	36.6
14/12/2019 00:00	03:08:35	1.534	27.833	36.9
14/12/2019 00:00	03:08:45	1.523	27.642	37.2
14/12/2019 00:00	03:08:55	1.508	27.36	37.4
14/12/2019 00:00	03:09:05	1.518	27.545	37.7
14/12/2019 00:00	03:09:15	1.519	27.57	38
14/12/2019 00:00	03:09:25	1.529	27.751	38.3
14/12/2019 00:00	03:09:35	1.528	27.721	38.6
14/12/2019 00:00	03:09:45	1.531	27.775	38.8
14/12/2019 00:00	03:09:55	1.514	27.476	39.1
14/12/2019 00:00	03:10:05	1.53	27.768	39.4
14/12/2019 00:00	03:10:15	1.524	27.66	39.7
14/12/2019 00:00	03:10:25	1.519	27.56	39.9
14/12/2019 00:00	03:10:35	1.514	27.472	40.2
14/12/2019 00:00	03:10:45	1.527	27.705	40.5
14/12/2019 00:00	03:10:55	1.531	27.788	40.8
14/12/2019 00:00	03:11:05	1.537	27.9	41
14/12/2019 00:00	03:11:15	1.532	27.799	41.3
14/12/2019 00:00	03:11:25	1.525	27.673	41.6
14/12/2019 00:00	03:11:35	1.537	27.885	41.9
14/12/2019 00:00	03:11:45	1.53	27.756	42.2
14/12/2019 00:00	03:11:55	1.521	27.603	42.4
14/12/2019 00:00	03:12:05	1.525	27.679	42.7
14/12/2019 00:00	03:12:15	1.531	27.789	43
14/12/2019 00:00	03:12:25	1.529	27.747	43.3
14/12/2019 00:00	03:12:35	1.528	27.727	43.5

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 4



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	03:12:45	1.533	27.815	43.8
14/12/2019 00:00	03:12:55	1.532	27.801	44.1
14/12/2019 00:00	03:13:05	1.523	27.629	44.4
14/12/2019 00:00	03:13:15	1.541	27.96	44.7
14/12/2019 00:00	03:13:25	1.535	27.851	44.9
14/12/2019 00:00	03:13:35	1.538	27.901	45.2
14/12/2019 00:00	03:13:45	1.526	27.698	45.5
14/12/2019 00:00	03:13:55	1.533	27.818	45.8
14/12/2019 00:00	03:14:05	1.534	27.828	46
14/12/2019 00:00	03:14:15	1.626	29.498	46.3
14/12/2019 00:00	03:14:25	1.611	29.228	46.6
14/12/2019 00:00	03:14:35	1.557	28.254	46.9
14/12/2019 00:00	03:14:45	1.55	28.127	46.9
14/12/2019 00:00	03:14:55	1.549	28.111	46.9
14/12/2019 00:00	03:15:05	1.549	28.109	46.9
14/12/2019 00:00	03:15:15	1.549	28.109	46.9
14/12/2019 00:00	03:15:25	1.549	28.109	46.9
14/12/2019 00:00	03:15:35	1.549	28.109	46.9
14/12/2019 00:00	03:15:45	1.549	28.109	46.9
14/12/2019 00:00	03:15:55	1.549	28.109	46.9
14/12/2019 00:00	03:16:05	1.549	28.109	46.9
14/12/2019 00:00	03:16:15	1.549	28.109	46.9
14/12/2019 00:00	03:16:25	1.549	28.109	46.9
14/12/2019 00:00	03:16:35	1.506	27.336	47
14/12/2019 00:00	03:16:45	1.52	27.591	47.3
14/12/2019 00:00	03:16:55	1.513	27.461	47.5
14/12/2019 00:00	03:17:05	1.523	27.641	47.8
14/12/2019 00:00	03:17:15	1.534	27.837	48.1
14/12/2019 00:00	03:17:25	1.535	27.851	48.4
14/12/2019 00:00	03:17:35	1.595	28.941	48.7
14/12/2019 00:00	03:17:45	1.606	29.146	48.8
14/12/2019 00:00	03:17:55	1.608	29.172	48.8
14/12/2019 00:00	03:18:05	1.55	28.119	48.9
14/12/2019 00:00	03:18:15	1.521	27.603	49.2
14/12/2019 00:00	03:18:25	1.522	27.628	49.4
14/12/2019 00:00	03:18:35	1.514	27.466	49.7
14/12/2019 00:00	03:18:45	1.526	27.692	50
14/12/2019 00:00	03:18:55	1.517	27.532	50.3
14/12/2019 00:00	03:19:05	1.513	27.451	50.5
14/12/2019 00:00	03:19:15	1.536	27.877	50.8
14/12/2019 00:00	03:19:25	1.534	27.834	51.1

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 4



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	03:19:35	1.538	27.911	51.4
14/12/2019 00:00	03:19:45	1.526	27.693	51.6
14/12/2019 00:00	03:19:55	1.535	27.859	51.9
14/12/2019 00:00	03:20:05	1.53	27.756	52.2
14/12/2019 00:00	03:20:15	1.525	27.668	52.5
14/12/2019 00:00	03:20:25	1.53	27.761	52.8
14/12/2019 00:00	03:20:35	1.535	27.857	53
14/12/2019 00:00	03:20:45	1.529	27.745	53.3
14/12/2019 00:00	03:20:55	1.532	27.807	53.6
14/12/2019 00:00	03:21:05	1.514	27.474	53.9
14/12/2019 00:00	03:21:15	1.524	27.657	54.1
14/12/2019 00:00	03:21:25	1.529	27.746	54.4
14/12/2019 00:00	03:21:35	1.529	27.741	54.7
14/12/2019 00:00	03:21:45	1.53	27.759	55
14/12/2019 00:00	03:21:55	1.544	28.013	55.3
14/12/2019 00:00	03:22:05	1.529	27.744	55.5
14/12/2019 00:00	03:22:15	1.533	27.826	55.8
14/12/2019 00:00	03:22:25	1.531	27.775	56.1
14/12/2019 00:00	03:22:35	1.533	27.828	56.4
14/12/2019 00:00	03:22:45	1.532	27.793	56.6
14/12/2019 00:00	03:22:55	1.53	27.763	56.9
14/12/2019 00:00	03:23:05	1.525	27.682	57.2
14/12/2019 00:00	03:23:15	1.527	27.708	57.5
14/12/2019 00:00	03:23:25	1.526	27.699	57.7
14/12/2019 00:00	03:23:35	1.526	27.692	58
14/12/2019 00:00	03:23:45	1.522	27.623	58.3
14/12/2019 00:00	03:23:55	1.53	27.762	58.6
14/12/2019 00:00	03:24:05	1.527	27.711	58.9
14/12/2019 00:00	03:24:15	1.527	27.708	59.1
14/12/2019 00:00	03:24:25	1.536	27.873	59.4
14/12/2019 00:00	03:24:35	1.541	27.965	59.7
14/12/2019 00:00	03:24:45	1.526	27.695	60
14/12/2019 00:00	03:24:55	1.523	27.645	60.2
14/12/2019 00:00	03:25:05	1.528	27.722	60.5
14/12/2019 00:00	03:25:15	1.519	27.557	60.8
14/12/2019 00:00	03:25:25	1.527	27.718	61.1
14/12/2019 00:00	03:25:35	1.525	27.682	61.4
14/12/2019 00:00	03:25:45	1.538	27.911	61.6
14/12/2019 00:00	03:25:55	1.533	27.824	61.9
14/12/2019 00:00	03:26:05	1.534	27.842	62.2
14/12/2019 00:00	03:26:15	1.537	27.883	62.5

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 4



ING. JOSE SANTOS ESCAMILLA LOPEZ

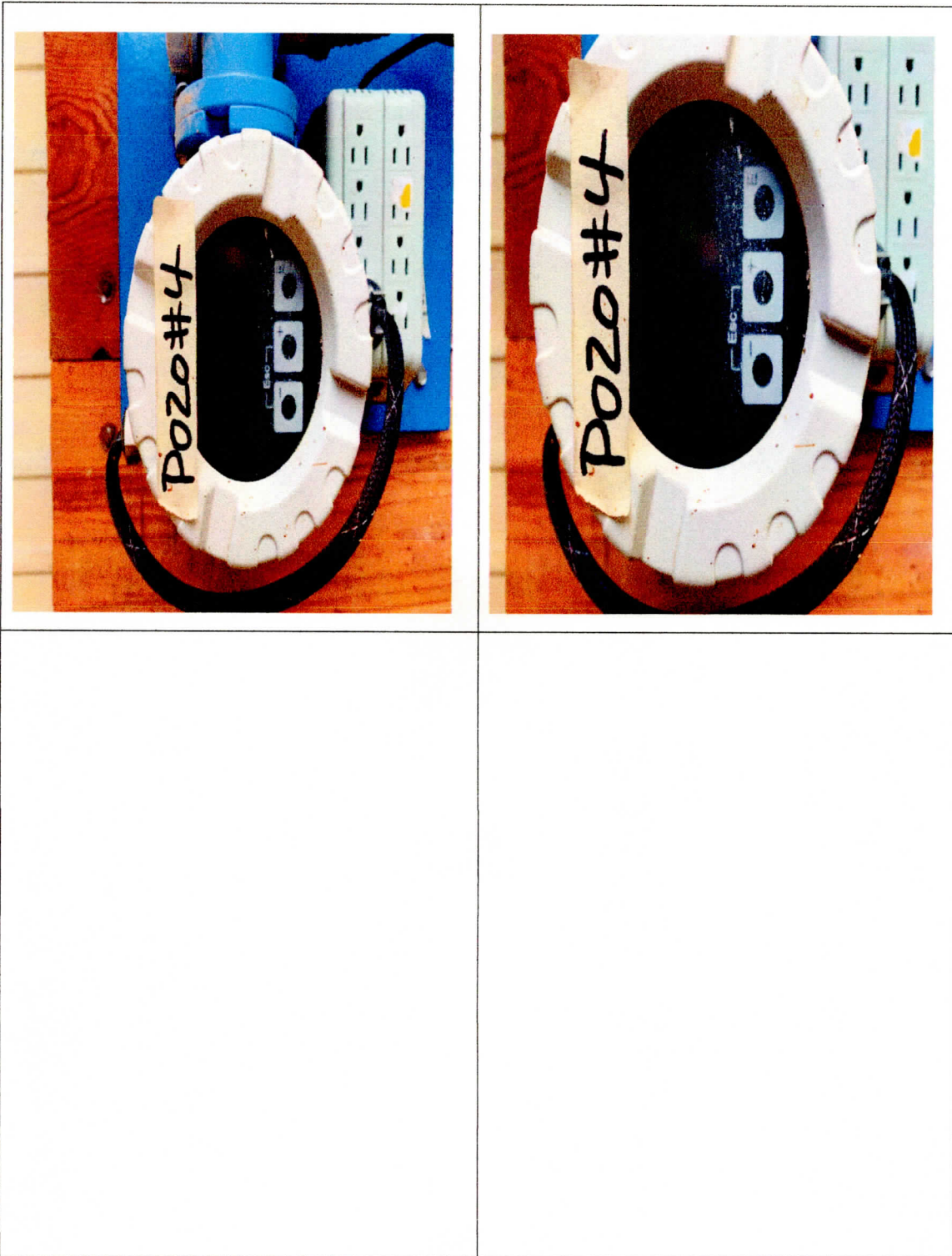
14/12/2019 00:00	03:26:25	1.531	27.785	62.7
14/12/2019 00:00	03:26:35	1.53	27.764	63
14/12/2019 00:00	03:26:45	1.521	27.596	63.3
14/12/2019 00:00	03:26:55	1.524	27.663	63.6
14/12/2019 00:00	03:27:05	1.521	27.607	63.9
14/12/2019 00:00	03:27:15	1.522	27.611	64.1
14/12/2019 00:00	03:27:25	1.512	27.432	64.4
14/12/2019 00:00	03:27:35	1.524	27.65	64.7
14/12/2019 00:00	03:27:45	1.582	28.702	65
14/12/2019 00:00	03:27:55	1.652	29.972	65.2
14/12/2019 00:00	03:28:05	1.661	30.137	65.2
14/12/2019 00:00	03:28:15	1.662	30.159	65.2
14/12/2019 00:00	03:28:25	1.662	30.162	65.2
14/12/2019 00:00	03:28:35	1.662	30.162	65.2
14/12/2019 00:00	03:28:45	1.662	30.162	65.2
14/12/2019 00:00	03:28:55	1.662	30.162	65.2
14/12/2019 00:00	03:29:05	1.662	30.162	65.2
14/12/2019 00:00	03:29:15	1.662	30.162	65.2
14/12/2019 00:00	03:29:25	1.662	30.162	65.2
14/12/2019 00:00	03:29:35	1.653	30	65.2
14/12/2019 00:00	03:29:45	1.494	27.11	65.5
14/12/2019 00:00	03:29:55	1.526	27.684	65.8
14/12/2019 00:00	03:30:05	1.527	27.709	66.1
14/12/2019 00:00	03:30:15	1.514	27.469	66.3
14/12/2019 00:00	03:30:25	1.516	27.516	66.6
14/12/2019 00:00	03:30:35	1.502	27.265	66.9
14/12/2019 00:00	03:30:45	1.51	27.405	67.2
14/12/2019 00:00	03:30:55	1.52	27.589	67.4
14/12/2019 00:00	03:31:05	1.527	27.714	67.7
14/12/2019 00:00	03:31:15	1.52	27.582	68
14/12/2019 00:00	03:31:25	1.51	27.406	68.3
14/12/2019 00:00	03:31:35	1.522	27.621	68.5
14/12/2019 00:00	03:31:45	1.533	27.819	68.8
14/12/2019 00:00	03:31:55	1.527	27.714	69.1
14/12/2019 00:00	03:32:05	1.514	27.477	69.4
14/12/2019 00:00	03:32:15	1.536	27.87	69.6
14/12/2019 00:00	03:32:25	1.52	27.575	69.9
14/12/2019 00:00	03:32:35	1.525	27.673	70.2
14/12/2019 00:00	03:32:45	1.539	27.935	70.5
14/12/2019 00:00	03:32:55	1.535	27.86	70.8
14/12/2019 00:00	03:33:05	1.535	27.857	71

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO 4



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	03:33:15	1.525	27.679	71.3
14/12/2019 00:00	03:33:25	1.519	27.572	71.6
14/12/2019 00:00	03:33:35	1.534	27.842	71.9
14/12/2019 00:00	03:33:45	1.526	27.69	72.1
14/12/2019 00:00	03:33:55	1.536	27.882	72.4
14/12/2019 00:00	03:34:05	1.525	27.67	72.7
14/12/2019 00:00	03:34:15	1.538	27.913	73
14/12/2019 00:00	03:34:25	1.537	27.887	73.3
14/12/2019 00:00	03:34:35	1.543	27.996	73.5
14/12/2019 00:00	03:34:45	1.536	27.87	73.8
14/12/2019 00:00	03:34:55	1.535	27.856	74.1
14/12/2019 00:00	03:35:05	1.532	27.794	74.4
14/12/2019 00:00	03:35:15	1.52	27.589	74.6
14/12/2019 00:00	03:35:25	1.539	27.935	74.9
14/12/2019 00:00	03:35:35	1.542	27.975	75.2
14/12/2019 00:00	03:35:45	1.536	27.877	75.5
14/12/2019 00:00	03:35:55	1.536	27.88	75.8
14/12/2019 00:00	03:36:05	1.54	27.948	76
14/12/2019 00:00	03:36:15	1.539	27.933	76.3
14/12/2019 00:00	03:36:25	1.521	27.593	76.6
14/12/2019 00:00	03:36:35	1.535	27.848	76.9



**IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
MATEHUALA POZO 11**



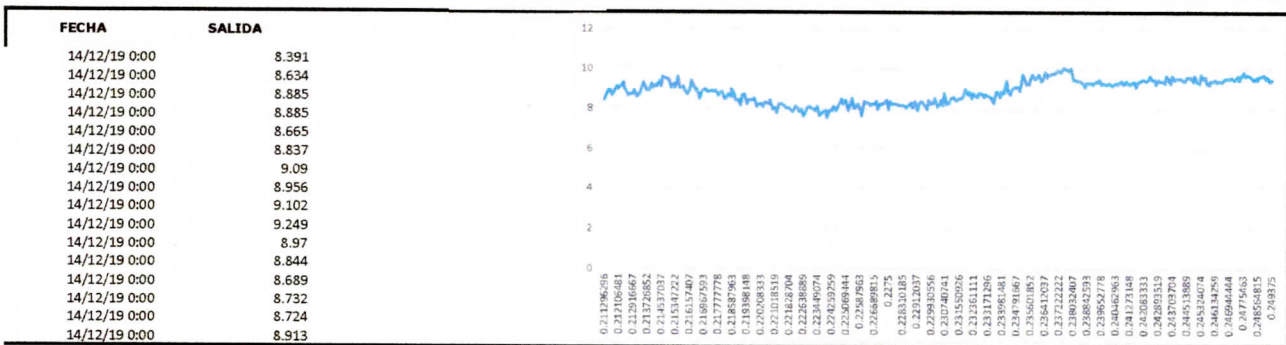
ING. JOSE SANTOS ESCAMILLA LOPEZ

FICHA TÉCNICA PARA MEDICIÓN INSTANTÁNEA DE CAUDALES			
Proyecto:			
No. Sitio:	Pozo 11	Fuente de Abastecimiento:	
Sector:		Fecha de Inicio de Registro:	14 de Dic 2019
Calle:		Fecha de fin de registro:	14 de Dic 2019
Colonia:		Hora:	17:04
GPS:	Latitud 23°53'3.95"N 60 min Estiaje:	Longitud 100°48'11.33"W	Altitud: 1726 MSNM

Tiempo de Op. Tiempo sin Operación:

MEDIDOR			
Tipo:	Caudalimetro por ultrasonico	Modelo	Portaflow X
		No. Serie	S10A2-00Y
Caudal Puntual:	8.87 LPS	No. De Medidor Ultrasonico	S/M
		Modelo	

GRÁFICA DE CAUDAL



Fotografía del macro medidor

Fotografía del medidor ultrasonico



Referencias del sitio de Medición:

Observaciones:



4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
14/12/2019 00:00	05:04:16	1.047	8.391	0.4
14/12/2019 00:00	05:04:26	1.078	8.634	0
14/12/2019 00:00	05:04:36	1.109	8.885	0.1
14/12/2019 00:00	05:04:46	1.109	8.885	0.2
14/12/2019 00:00	05:04:56	1.082	8.665	0.2
14/12/2019 00:00	05:05:06	1.103	8.837	0.3
14/12/2019 00:00	05:05:16	1.135	9.09	0.4
14/12/2019 00:00	05:05:26	1.118	8.956	0.5
14/12/2019 00:00	05:05:36	1.136	9.102	0.6
14/12/2019 00:00	05:05:46	1.154	9.249	0.7
14/12/2019 00:00	05:05:56	1.12	8.97	0.8
14/12/2019 00:00	05:06:06	1.104	8.844	0.9
14/12/2019 00:00	05:06:16	1.085	8.689	1
14/12/2019 00:00	05:06:26	1.09	8.732	1
14/12/2019 00:00	05:06:36	1.089	8.724	1.1
14/12/2019 00:00	05:06:46	1.113	8.913	1.2
14/12/2019 00:00	05:06:56	1.073	8.598	1.3
14/12/2019 00:00	05:07:06	1.092	8.749	1.4
14/12/2019 00:00	05:07:16	1.105	8.852	1.5
14/12/2019 00:00	05:07:26	1.158	9.276	1.6
14/12/2019 00:00	05:07:36	1.138	9.113	1.7
14/12/2019 00:00	05:07:46	1.108	8.877	1.7
14/12/2019 00:00	05:07:56	1.11	8.889	1.8
14/12/2019 00:00	05:08:06	1.148	9.199	1.9
14/12/2019 00:00	05:08:16	1.131	9.057	2
14/12/2019 00:00	05:08:26	1.142	9.151	2.1
14/12/2019 00:00	05:08:36	1.138	9.12	2.2
14/12/2019 00:00	05:08:46	1.167	9.351	2.3
14/12/2019 00:00	05:08:56	1.136	9.103	2.4
14/12/2019 00:00	05:09:06	1.199	9.605	2.5
14/12/2019 00:00	05:09:16	1.185	9.497	2.6
14/12/2019 00:00	05:09:26	1.182	9.469	2.7
14/12/2019 00:00	05:09:36	1.184	9.482	2.8
14/12/2019 00:00	05:09:46	1.126	9.023	2.9
14/12/2019 00:00	05:09:56	1.15	9.212	2.9
14/12/2019 00:00	05:10:06	1.13	9.051	3
14/12/2019 00:00	05:10:16	1.197	9.592	3.1
14/12/2019 00:00	05:10:26	1.123	9	3.2

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14/12/2019 00:00	05:10:36	1.124	9.006	3.3
14/12/2019 00:00	05:10:46	1.135	9.095	3.4
14/12/2019 00:00	05:10:56	1.114	8.929	3.5
14/12/2019 00:00	05:11:06	1.09	8.73	3.6
14/12/2019 00:00	05:11:16	1.111	8.9	3.7
14/12/2019 00:00	05:11:26	1.17	9.373	3.8
14/12/2019 00:00	05:11:36	1.134	9.088	3.9
14/12/2019 00:00	05:11:46	1.111	8.901	3.9
14/12/2019 00:00	05:11:56	1.119	8.969	4
14/12/2019 00:00	05:12:06	1.055	8.451	4.1
14/12/2019 00:00	05:12:16	1.102	8.833	4.2
14/12/2019 00:00	05:12:26	1.113	8.915	4.3
14/12/2019 00:00	05:12:36	1.119	8.965	4.4
14/12/2019 00:00	05:12:46	1.101	8.823	4.5
14/12/2019 00:00	05:12:56	1.1	8.814	4.6
14/12/2019 00:00	05:13:06	1.111	8.902	4.7
14/12/2019 00:00	05:13:16	1.104	8.845	4.7
14/12/2019 00:00	05:13:26	1.11	8.896	4.8
14/12/2019 00:00	05:13:36	1.083	8.676	4.9
14/12/2019 00:00	05:13:46	1.094	8.765	5
14/12/2019 00:00	05:13:56	1.101	8.821	5.1
14/12/2019 00:00	05:14:06	1.059	8.486	5.2
14/12/2019 00:00	05:14:16	1.068	8.556	5.3
14/12/2019 00:00	05:14:26	1.091	8.743	5.4
14/12/2019 00:00	05:14:36	1.075	8.609	5.4
14/12/2019 00:00	05:14:46	1.117	8.946	5.5
14/12/2019 00:00	05:14:56	1.085	8.692	5.6
14/12/2019 00:00	05:15:06	1.053	8.439	5.7
14/12/2019 00:00	05:15:16	1.047	8.392	5.8
14/12/2019 00:00	05:15:26	1.016	8.143	5.9
14/12/2019 00:00	05:15:36	1.077	8.628	6
14/12/2019 00:00	05:15:46	1.09	8.735	6
14/12/2019 00:00	05:15:56	1.027	8.225	6.1
14/12/2019 00:00	05:16:06	1.051	8.42	6.2
14/12/2019 00:00	05:16:16	1.053	8.44	6.3
14/12/2019 00:00	05:16:26	1.048	8.397	6.4
14/12/2019 00:00	05:16:36	1.066	8.542	6.5
14/12/2019 00:00	05:16:46	1.014	8.127	6.5
14/12/2019 00:00	05:16:56	1.024	8.208	6.6
14/12/2019 00:00	05:17:06	1.027	8.231	6.7
14/12/2019 00:00	05:17:16	1.009	8.081	6.8

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14/12/2019 00:00	05:17:26	1.033	8.276	6.9
14/12/2019 00:00	05:17:36	1.031	8.258	7
14/12/2019 00:00	05:17:46	1.025	8.214	7
14/12/2019 00:00	05:17:56	1.047	8.389	7.1
14/12/2019 00:00	05:18:06	0.999	8.004	7.2
14/12/2019 00:00	05:18:16	1.005	8.049	7.3
14/12/2019 00:00	05:18:26	0.973	7.794	7.4
14/12/2019 00:00	05:18:36	1.03	8.249	7.4
14/12/2019 00:00	05:18:46	1.024	8.203	7.5
14/12/2019 00:00	05:18:56	1.017	8.146	7.6
14/12/2019 00:00	05:19:06	1.01	8.09	7.7
14/12/2019 00:00	05:19:16	1.001	8.02	7.8
14/12/2019 00:00	05:19:26	1.006	8.062	7.8
14/12/2019 00:00	05:19:36	0.985	7.892	7.9
14/12/2019 00:00	05:19:46	0.979	7.848	8
14/12/2019 00:00	05:19:56	1.015	8.129	8.1
14/12/2019 00:00	05:20:06	1.005	8.05	8.2
14/12/2019 00:00	05:20:16	0.979	7.845	8.2
14/12/2019 00:00	05:20:26	0.995	7.975	8.3
14/12/2019 00:00	05:20:36	0.949	7.608	8.4
14/12/2019 00:00	05:20:46	0.964	7.724	8.5
14/12/2019 00:00	05:20:56	1.001	8.019	8.6
14/12/2019 00:00	05:21:06	1.009	8.087	8.6
14/12/2019 00:00	05:21:16	1.006	8.058	8.7
14/12/2019 00:00	05:21:26	0.992	7.951	8.8
14/12/2019 00:00	05:21:36	0.992	7.945	8.9
14/12/2019 00:00	05:21:46	1.008	8.076	8.9
14/12/2019 00:00	05:21:56	0.96	7.694	9
14/12/2019 00:00	05:22:06	0.965	7.731	9.1
14/12/2019 00:00	05:22:16	0.983	7.88	9.2
14/12/2019 00:00	05:22:26	0.989	7.925	9.3
14/12/2019 00:00	05:22:36	0.945	7.571	9.3
14/12/2019 00:00	05:22:46	0.984	7.887	9.4
14/12/2019 00:00	05:22:56	0.985	7.893	9.5
14/12/2019 00:00	05:23:06	1.013	8.114	9.6
14/12/2019 00:00	05:23:16	0.99	7.932	9.7
14/12/2019 00:00	05:23:26	1.013	8.114	9.7
14/12/2019 00:00	05:23:36	1.026	8.22	9.8
14/12/2019 00:00	05:23:46	1.061	8.501	9.9
14/12/2019 00:00	05:23:56	1.025	8.215	10
14/12/2019 00:00	05:24:06	1.053	8.439	10.1

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14/12/2019 00:00	05:24:16	0.988	7.912	10.2
14/12/2019 00:00	05:24:26	1.013	8.12	10.2
14/12/2019 00:00	05:24:36	1.065	8.535	10.3
14/12/2019 00:00	05:24:46	1.005	8.053	10.4
14/12/2019 00:00	05:24:56	1.001	8.022	10.5
14/12/2019 00:00	05:25:06	1.024	8.202	10.6
14/12/2019 00:00	05:25:16	0.997	7.987	10.6
14/12/2019 00:00	05:25:26	0.957	7.669	10.7
14/12/2019 00:00	05:25:36	1.044	8.368	10.8
14/12/2019 00:00	05:25:46	1.036	8.303	10.9
14/12/2019 00:00	05:25:56	1.036	8.299	11
14/12/2019 00:00	05:26:06	1.021	8.184	11
14/12/2019 00:00	05:26:16	1.026	8.218	11.1
14/12/2019 00:00	05:26:26	1.029	8.242	11.2
14/12/2019 00:00	05:26:36	1.043	8.36	11.3
14/12/2019 00:00	05:26:46	0.994	7.967	11.4
14/12/2019 00:00	05:26:56	1.03	8.255	11.5
14/12/2019 00:00	05:27:06	1.023	8.196	11.5
14/12/2019 00:00	05:27:16	1.033	8.276	11.6
14/12/2019 00:00	05:27:26	1.048	8.395	11.7
14/12/2019 00:00	05:27:36	0.996	7.976	11.8
14/12/2019 00:00	05:27:46	1.044	8.364	11.9
14/12/2019 00:00	05:27:56	1.028	8.239	12
14/12/2019 00:00	05:28:06	1.024	8.201	12
14/12/2019 00:00	05:28:16	1.029	8.241	12.1
14/12/2019 00:00	05:28:26	1.021	8.178	12.2
14/12/2019 00:00	05:28:36	1.022	8.187	12.3
14/12/2019 00:00	05:28:46	1.016	8.144	12.4
14/12/2019 00:00	05:28:56	1.009	8.086	12.4
14/12/2019 00:00	05:29:06	1	8.013	12.5
14/12/2019 00:00	05:29:16	1.018	8.155	12.6
14/12/2019 00:00	05:29:26	1.034	8.282	12.7
14/12/2019 00:00	05:29:36	1.002	8.031	12.8
14/12/2019 00:00	05:29:46	1.039	8.327	12.8
14/12/2019 00:00	05:29:56	0.99	7.935	12.9
14/12/2019 00:00	05:30:06	1.029	8.245	13
14/12/2019 00:00	05:30:16	1.045	8.374	13.1
14/12/2019 00:00	05:30:26	1.032	8.265	13.2
14/12/2019 00:00	05:30:36	1.015	8.135	13.3
14/12/2019 00:00	05:30:46	0.992	7.951	13.3
14/12/2019 00:00	05:30:56	1.049	8.402	13.4

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14/12/2019 00:00	05:31:06	1.03	8.251	13.5
14/12/2019 00:00	05:31:16	1.032	8.272	13.6
14/12/2019 00:00	05:31:26	1.063	8.513	13.7
14/12/2019 00:00	05:31:36	1.012	8.106	13.8
14/12/2019 00:00	05:31:46	1.023	8.199	13.8
14/12/2019 00:00	05:31:56	1.049	8.401	13.9
14/12/2019 00:00	05:32:06	1.022	8.187	14
14/12/2019 00:00	05:32:16	1.094	8.765	14.1
14/12/2019 00:00	05:32:26	1.029	8.248	14.2
14/12/2019 00:00	05:32:36	1.034	8.285	14.3
14/12/2019 00:00	05:32:46	1.06	8.489	14.3
14/12/2019 00:00	05:32:56	1.071	8.577	14.4
14/12/2019 00:00	05:33:06	1.051	8.42	14.5
14/12/2019 00:00	05:33:16	1.051	8.418	14.6
14/12/2019 00:00	05:33:26	1.064	8.527	14.7
14/12/2019 00:00	05:33:36	1.068	8.56	14.8
14/12/2019 00:00	05:33:46	1.071	8.578	14.9
14/12/2019 00:00	05:33:56	1.12	8.972	14.9
14/12/2019 00:00	05:34:06	1.09	8.732	15
14/12/2019 00:00	05:34:16	1.101	8.824	15.1
14/12/2019 00:00	05:34:26	1.065	8.534	15.2
14/12/2019 00:00	05:34:36	1.097	8.79	15.3
14/12/2019 00:00	05:34:46	1.083	8.674	15.4
14/12/2019 00:00	05:34:56	1.07	8.576	15.5
14/12/2019 00:00	05:35:06	1.093	8.759	15.6
14/12/2019 00:00	05:35:16	1.094	8.768	15.6
14/12/2019 00:00	05:35:26	1.073	8.596	15.7
14/12/2019 00:00	05:35:36	1.091	8.739	15.8
14/12/2019 00:00	05:35:46	1.084	8.683	15.9
14/12/2019 00:00	05:35:56	1.073	8.595	16
14/12/2019 00:00	05:36:06	1.057	8.468	16.1
14/12/2019 00:00	05:36:16	1.037	8.312	16.2
14/12/2019 00:00	05:36:26	1.1	8.814	16.2
14/12/2019 00:00	05:36:36	1.103	8.835	16.3
14/12/2019 00:00	05:36:46	1.075	8.615	16.4
14/12/2019 00:00	05:36:56	1.103	8.835	16.5
14/12/2019 00:00	05:37:06	1.097	8.789	16.6
14/12/2019 00:00	05:37:16	1.17	9.373	16.7
14/12/2019 00:00	05:37:26	1.11	8.891	16.8
14/12/2019 00:00	05:37:36	1.09	8.729	16.9
14/12/2019 00:00	05:37:46	1.121	8.979	17

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14/12/2019 00:00	05:37:56	1.131	9.059	17
14/12/2019 00:00	05:38:06	1.137	9.113	17.1
14/12/2019 00:00	05:38:16	1.129	9.044	17.2
14/12/2019 00:00	05:38:26	1.114	8.926	17.3
14/12/2019 00:00	05:38:36	1.211	9.703	17.4
14/12/2019 00:00	05:38:46	1.197	9.589	17.5
14/12/2019 00:00	05:38:56	1.151	9.222	17.6
14/12/2019 00:00	05:39:06	1.15	9.216	17.7
14/12/2019 00:00	05:39:16	1.174	9.405	17.8
14/12/2019 00:00	05:39:26	1.215	9.737	17.9
14/12/2019 00:00	05:39:36	1.187	9.507	18
14/12/2019 00:00	05:39:46	1.187	9.512	18.1
14/12/2019 00:00	05:39:56	1.213	9.715	18.2
14/12/2019 00:00	05:40:06	1.17	9.374	18.3
14/12/2019 00:00	05:40:16	1.18	9.454	18.4
14/12/2019 00:00	05:40:26	1.226	9.824	18.5
14/12/2019 00:00	05:40:36	1.2	9.616	18.6
14/12/2019 00:00	05:40:46	1.212	9.706	18.7
14/12/2019 00:00	05:40:56	1.21	9.697	18.7
14/12/2019 00:00	05:41:06	1.221	9.784	18.8
14/12/2019 00:00	05:41:16	1.22	9.772	18.9
14/12/2019 00:00	05:41:26	1.236	9.905	19
14/12/2019 00:00	05:41:36	1.235	9.892	19.1
14/12/2019 00:00	05:41:46	1.224	9.808	19.2
14/12/2019 00:00	05:41:56	1.257	10.067	19.3
14/12/2019 00:00	05:42:06	1.252	10.029	19.4
14/12/2019 00:00	05:42:16	1.247	9.987	19.5
14/12/2019 00:00	05:42:26	1.232	9.874	19.6
14/12/2019 00:00	05:42:36	1.253	10.036	19.7
14/12/2019 00:00	05:42:46	1.179	9.449	19.8
14/12/2019 00:00	05:42:56	1.182	9.466	19.9
14/12/2019 00:00	05:43:06	1.175	9.415	20
14/12/2019 00:00	05:43:16	1.175	9.413	20.1
14/12/2019 00:00	05:43:26	1.164	9.326	20.2
14/12/2019 00:00	05:43:36	1.158	9.279	20.3
14/12/2019 00:00	05:43:46	1.133	9.08	20.4
14/12/2019 00:00	05:43:56	1.16	9.293	20.5
14/12/2019 00:00	05:44:06	1.159	9.283	20.6
14/12/2019 00:00	05:44:16	1.154	9.249	20.7
14/12/2019 00:00	05:44:26	1.153	9.238	20.8
14/12/2019 00:00	05:44:36	1.168	9.359	20.9

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14/12/2019 00:00	05:44:46	1.164	9.322	21
14/12/2019 00:00	05:44:56	1.185	9.493	21.1
14/12/2019 00:00	05:45:06	1.15	9.212	21.1
14/12/2019 00:00	05:45:16	1.156	9.26	21.2
14/12/2019 00:00	05:45:26	1.153	9.235	21.3
14/12/2019 00:00	05:45:36	1.148	9.2	21.4
14/12/2019 00:00	05:45:46	1.157	9.268	21.5
14/12/2019 00:00	05:45:56	1.145	9.175	21.6
14/12/2019 00:00	05:46:06	1.153	9.24	21.7
14/12/2019 00:00	05:46:16	1.154	9.249	21.8
14/12/2019 00:00	05:46:26	1.152	9.229	21.9
14/12/2019 00:00	05:46:36	1.164	9.329	22
14/12/2019 00:00	05:46:46	1.17	9.372	22.1
14/12/2019 00:00	05:46:56	1.153	9.241	22.2
14/12/2019 00:00	05:47:06	1.173	9.398	22.3
14/12/2019 00:00	05:47:16	1.156	9.259	22.3
14/12/2019 00:00	05:47:26	1.153	9.241	22.4
14/12/2019 00:00	05:47:36	1.155	9.251	22.5
14/12/2019 00:00	05:47:46	1.166	9.34	22.6
14/12/2019 00:00	05:47:56	1.132	9.071	22.7
14/12/2019 00:00	05:48:06	1.161	9.304	22.8
14/12/2019 00:00	05:48:16	1.17	9.376	22.9
14/12/2019 00:00	05:48:26	1.178	9.436	23
14/12/2019 00:00	05:48:36	1.179	9.443	23.1
14/12/2019 00:00	05:48:46	1.175	9.415	23.2
14/12/2019 00:00	05:48:56	1.186	9.5	23.3
14/12/2019 00:00	05:49:06	1.205	9.656	23.4
14/12/2019 00:00	05:49:16	1.181	9.46	23.5
14/12/2019 00:00	05:49:26	1.182	9.47	23.6
14/12/2019 00:00	05:49:36	1.154	9.246	23.7
14/12/2019 00:00	05:49:46	1.178	9.435	23.8
14/12/2019 00:00	05:49:56	1.176	9.421	23.8
14/12/2019 00:00	05:50:06	1.177	9.427	23.9
14/12/2019 00:00	05:50:16	1.158	9.275	24
14/12/2019 00:00	05:50:26	1.202	9.628	24.1
14/12/2019 00:00	05:50:36	1.183	9.479	24.2
14/12/2019 00:00	05:50:46	1.156	9.265	24.3
14/12/2019 00:00	05:50:56	1.201	9.626	24.4
14/12/2019 00:00	05:51:06	1.179	9.443	24.5
14/12/2019 00:00	05:51:16	1.189	9.526	24.6
14/12/2019 00:00	05:51:26	1.19	9.537	24.7

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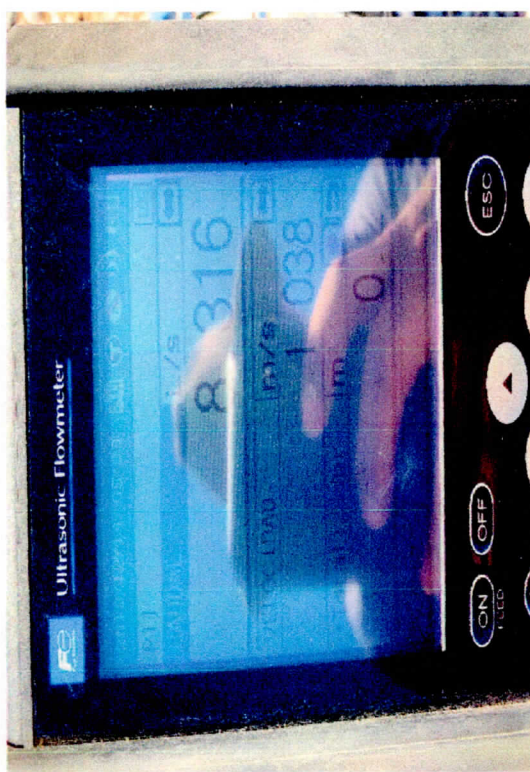
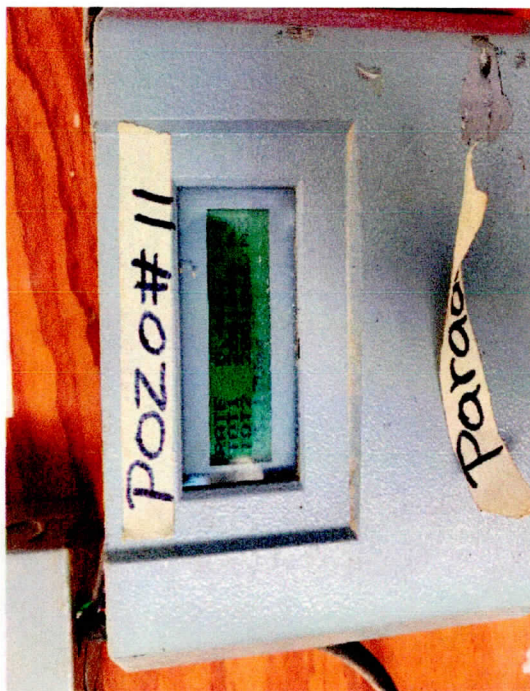
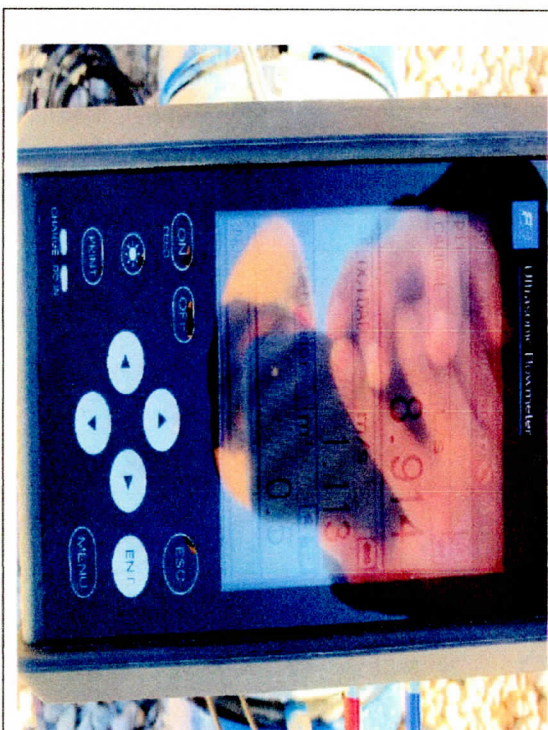
14/12/2019 00:00	05:51:36	1.189	9.523	24.8
14/12/2019 00:00	05:51:46	1.179	9.45	24.9
14/12/2019 00:00	05:51:56	1.175	9.411	25
14/12/2019 00:00	05:52:06	1.197	9.591	25.1
14/12/2019 00:00	05:52:16	1.194	9.565	25.2
14/12/2019 00:00	05:52:26	1.194	9.566	25.3
14/12/2019 00:00	05:52:36	1.176	9.423	25.4
14/12/2019 00:00	05:52:46	1.202	9.63	25.5
14/12/2019 00:00	05:52:56	1.162	9.311	25.6
14/12/2019 00:00	05:53:06	1.156	9.261	25.6
14/12/2019 00:00	05:53:16	1.21	9.692	25.7
14/12/2019 00:00	05:53:26	1.186	9.501	25.8
14/12/2019 00:00	05:53:36	1.196	9.583	25.9
14/12/2019 00:00	05:53:46	1.16	9.291	26
14/12/2019 00:00	05:53:56	1.148	9.201	26.1
14/12/2019 00:00	05:54:06	1.172	9.392	26.2
14/12/2019 00:00	05:54:16	1.174	9.408	26.3
14/12/2019 00:00	05:54:26	1.179	9.444	26.4
14/12/2019 00:00	05:54:36	1.169	9.367	26.5
14/12/2019 00:00	05:54:46	1.171	9.384	26.6
14/12/2019 00:00	05:54:56	1.165	9.334	26.7
14/12/2019 00:00	05:55:06	1.176	9.424	26.8
14/12/2019 00:00	05:55:16	1.188	9.517	26.9
14/12/2019 00:00	05:55:26	1.191	9.539	27
14/12/2019 00:00	05:55:36	1.187	9.507	27.1
14/12/2019 00:00	05:55:46	1.195	9.577	27.2
14/12/2019 00:00	05:55:56	1.179	9.447	27.3
14/12/2019 00:00	05:56:06	1.186	9.503	27.4
14/12/2019 00:00	05:56:16	1.202	9.632	27.4
14/12/2019 00:00	05:56:26	1.177	9.433	27.5
14/12/2019 00:00	05:56:36	1.203	9.642	27.6
14/12/2019 00:00	05:56:46	1.225	9.813	27.7
14/12/2019 00:00	05:56:56	1.203	9.64	27.8
14/12/2019 00:00	05:57:06	1.211	9.699	27.9
14/12/2019 00:00	05:57:16	1.206	9.666	28
14/12/2019 00:00	05:57:26	1.195	9.577	28.1
14/12/2019 00:00	05:57:36	1.184	9.487	28.2
14/12/2019 00:00	05:57:46	1.198	9.599	28.3
14/12/2019 00:00	05:57:56	1.178	9.442	28.4
14/12/2019 00:00	05:58:06	1.205	9.651	28.5
14/12/2019 00:00	05:58:16	1.201	9.621	28.6

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 11



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	05:58:26	1.21	9.693	28.7
14/12/2019 00:00	05:58:36	1.187	9.512	28.8
14/12/2019 00:00	05:58:46	1.196	9.583	28.9
14/12/2019 00:00	05:58:56	1.171	9.382	29
14/12/2019 00:00	05:59:06	1.185	9.49	29.1





 A photograph of a white water meter mounted on a wall. The meter has a green display window. Two pieces of yellow tape are attached to the meter: one on the left with the handwritten text 'POZO # 11' and one on the right with the handwritten text 'Paras'. The meter is set against a grey wall, and a wooden surface is visible to the left.	

**IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
MATEHUALA POZO 12**



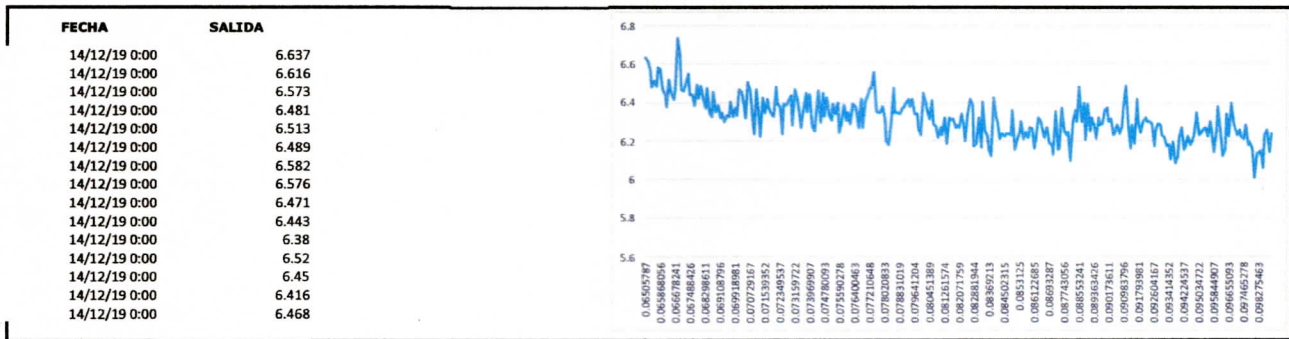
ING. JOSE SANTOS ESCAMILLA LOPEZ



FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES				
Proyecto:				
No. Sitio:	Pozo 12		Fuente de Abastecimiento:	
Sector:			Fecha de Inicio de Registro:	14 de Dic 2019
Calle:			Fecha de fin de registro:	14 de Dic 2019
Colonia:			Hora:	13:33
GPS:	Latitud	23°53'19.53"N	Longitud	100°48'23.95"W
	60 min	Estiaje:	Altitud:	1728 MSNM

Tiempo de Op. Tiempo sin Operación:

MEDIDOR				
Tipo:	Caudalmetro por ultrasonico	Modelo	Portaflow X	No. Serie S10A2-00Y
Caudal Puntual:	6.31 LPS	No. De Medidor Ultrasonico	S/M	Modelo

GRÁFICA DE CAUDAL



Fotografía del macro medidor	Fotografía del medidor ultrasonico
	
Referencias del sitio de Medición:	
Observaciones:	

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 12



ING. JOSE SANTOS ESCAMILLA LOPEZ

12		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
14/12/2019 00:00	01:33:41	0.825	6.637	0.1
14/12/2019 00:00	01:33:51	0.822	6.616	0.2
14/12/2019 00:00	01:34:01	0.817	6.573	0.2
14/12/2019 00:00	01:34:11	0.806	6.481	0.3
14/12/2019 00:00	01:34:21	0.81	6.513	0.4
14/12/2019 00:00	01:34:31	0.807	6.489	0.4
14/12/2019 00:00	01:34:41	0.818	6.582	0.5
14/12/2019 00:00	01:34:51	0.817	6.576	0.5
14/12/2019 00:00	01:35:01	0.804	6.471	0.6
14/12/2019 00:00	01:35:11	0.801	6.443	0.7
14/12/2019 00:00	01:35:21	0.793	6.38	0.7
14/12/2019 00:00	01:35:31	0.81	6.52	0.8
14/12/2019 00:00	01:35:41	0.802	6.45	0.9
14/12/2019 00:00	01:35:51	0.797	6.416	0.9
14/12/2019 00:00	01:36:01	0.804	6.468	1
14/12/2019 00:00	01:36:11	0.837	6.737	1.1
14/12/2019 00:00	01:36:21	0.826	6.646	1.1
14/12/2019 00:00	01:36:31	0.804	6.47	1.2
14/12/2019 00:00	01:36:41	0.803	6.46	1.3
14/12/2019 00:00	01:36:51	0.808	6.5	1.3
14/12/2019 00:00	01:37:01	0.814	6.552	1.4
14/12/2019 00:00	01:37:11	0.801	6.445	1.5
14/12/2019 00:00	01:37:21	0.8	6.44	1.5
14/12/2019 00:00	01:37:31	0.794	6.384	1.6
14/12/2019 00:00	01:37:41	0.807	6.493	1.7
14/12/2019 00:00	01:37:51	0.798	6.421	1.7
14/12/2019 00:00	01:38:01	0.806	6.486	1.8
14/12/2019 00:00	01:38:11	0.799	6.424	1.8
14/12/2019 00:00	01:38:21	0.792	6.371	1.9
14/12/2019 00:00	01:38:31	0.805	6.475	2
14/12/2019 00:00	01:38:41	0.789	6.348	2
14/12/2019 00:00	01:38:51	0.786	6.325	2.1
14/12/2019 00:00	01:39:01	0.802	6.456	2.2
14/12/2019 00:00	01:39:11	0.79	6.352	2.2
14/12/2019 00:00	01:39:21	0.794	6.386	2.3
14/12/2019 00:00	01:39:31	0.786	6.323	2.4
14/12/2019 00:00	01:39:41	0.789	6.349	2.4
14/12/2019 00:00	01:39:51	0.783	6.303	2.5
14/12/2019 00:00	01:40:01	0.787	6.331	2.5

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO 12



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	01:40:11	0.787	6.328	2.6
14/12/2019 00:00	01:40:21	0.796	6.404	2.7
14/12/2019 00:00	01:40:31	0.787	6.328	2.7
14/12/2019 00:00	01:40:41	0.792	6.37	2.8
14/12/2019 00:00	01:40:51	0.787	6.335	2.9
14/12/2019 00:00	01:41:01	0.804	6.467	2.9
14/12/2019 00:00	01:41:11	0.803	6.458	3
14/12/2019 00:00	01:41:21	0.793	6.381	3.1
14/12/2019 00:00	01:41:31	0.786	6.322	3.1
14/12/2019 00:00	01:41:41	0.809	6.505	3.2
14/12/2019 00:00	01:41:51	0.803	6.461	3.2
14/12/2019 00:00	01:42:01	0.783	6.298	3.3
14/12/2019 00:00	01:42:11	0.775	6.236	3.4
14/12/2019 00:00	01:42:21	0.804	6.468	3.4
14/12/2019 00:00	01:42:31	0.785	6.319	3.5
14/12/2019 00:00	01:42:41	0.774	6.227	3.6
14/12/2019 00:00	01:42:51	0.799	6.426	3.6
14/12/2019 00:00	01:43:01	0.789	6.345	3.7
14/12/2019 00:00	01:43:11	0.797	6.415	3.8
14/12/2019 00:00	01:43:21	0.792	6.37	3.8
14/12/2019 00:00	01:43:31	0.788	6.342	3.9
14/12/2019 00:00	01:43:41	0.786	6.326	3.9
14/12/2019 00:00	01:43:51	0.806	6.481	4
14/12/2019 00:00	01:44:01	0.794	6.391	4.1
14/12/2019 00:00	01:44:11	0.793	6.379	4.1
14/12/2019 00:00	01:44:21	0.775	6.237	4.2
14/12/2019 00:00	01:44:31	0.795	6.394	4.3
14/12/2019 00:00	01:44:41	0.794	6.388	4.3
14/12/2019 00:00	01:44:51	0.797	6.412	4.4
14/12/2019 00:00	01:45:01	0.8	6.439	4.5
14/12/2019 00:00	01:45:11	0.781	6.284	4.5
14/12/2019 00:00	01:45:21	0.804	6.465	4.6
14/12/2019 00:00	01:45:31	0.798	6.419	4.7
14/12/2019 00:00	01:45:41	0.786	6.327	4.7
14/12/2019 00:00	01:45:51	0.779	6.268	4.8
14/12/2019 00:00	01:46:01	0.792	6.368	4.8
14/12/2019 00:00	01:46:11	0.801	6.448	4.9
14/12/2019 00:00	01:46:21	0.79	6.356	5
14/12/2019 00:00	01:46:31	0.801	6.441	5
14/12/2019 00:00	01:46:41	0.78	6.274	5.1
14/12/2019 00:00	01:46:51	0.777	6.249	5.2

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO 25



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	06:56:00	1.507	12.121	19.2
14/12/2019 00:00	06:56:10	1.507	12.121	19.4
14/12/2019 00:00	06:56:20	1.504	12.099	19.5
14/12/2019 00:00	06:56:30	1.497	12.043	19.6
14/12/2019 00:00	06:56:40	1.498	12.046	19.7
14/12/2019 00:00	06:56:50	1.501	12.076	19.9
14/12/2019 00:00	06:57:00	1.494	12.016	20
14/12/2019 00:00	06:57:10	1.499	12.059	20.1
14/12/2019 00:00	06:57:20	1.491	11.991	20.2
14/12/2019 00:00	06:57:30	1.491	11.995	20.3
14/12/2019 00:00	06:57:40	1.48	11.906	20.5
14/12/2019 00:00	06:57:50	1.486	11.955	20.6
14/12/2019 00:00	06:58:00	1.485	11.945	20.7
14/12/2019 00:00	06:58:10	1.499	12.057	20.8
14/12/2019 00:00	06:58:20	1.492	12.003	20.9
14/12/2019 00:00	06:58:30	1.484	11.933	21.1
14/12/2019 00:00	06:58:40	1.491	11.991	21.2
14/12/2019 00:00	06:58:50	1.486	11.954	21.3
14/12/2019 00:00	06:59:00	1.487	11.957	21.4
14/12/2019 00:00	06:59:10	1.495	12.025	21.5
14/12/2019 00:00	06:59:20	1.484	11.937	21.6
14/12/2019 00:00	06:59:30	1.486	11.952	21.8
14/12/2019 00:00	06:59:40	1.481	11.912	21.9
14/12/2019 00:00	06:59:50	1.483	11.931	22
14/12/2019 00:00	07:00:00	1.481	11.913	22.1
14/12/2019 00:00	07:00:10	1.485	11.94	22.2
14/12/2019 00:00	07:00:20	1.481	11.913	22.4
14/12/2019 00:00	07:00:30	1.489	11.972	22.5
14/12/2019 00:00	07:00:40	1.487	11.963	22.6
14/12/2019 00:00	07:00:50	1.482	11.923	22.7
14/12/2019 00:00	07:01:00	1.493	12.009	22.8
14/12/2019 00:00	07:01:10	1.495	12.025	23
14/12/2019 00:00	07:01:20	1.498	12.047	23.1
14/12/2019 00:00	07:01:30	1.509	12.135	23.2
14/12/2019 00:00	07:01:40	1.505	12.105	23.3
14/12/2019 00:00	07:01:50	1.498	12.046	23.4
14/12/2019 00:00	07:02:00	1.496	12.035	23.6
14/12/2019 00:00	07:02:10	1.493	12.012	23.7
14/12/2019 00:00	07:02:20	1.498	12.05	23.8
14/12/2019 00:00	07:02:30	1.493	12.008	23.9
14/12/2019 00:00	07:02:40	1.49	11.987	24

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 12



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	01:47:01	0.786	6.32	5.2
14/12/2019 00:00	01:47:11	0.803	6.459	5.3
14/12/2019 00:00	01:47:21	0.782	6.293	5.4
14/12/2019 00:00	01:47:31	0.801	6.446	5.4
14/12/2019 00:00	01:47:41	0.786	6.326	5.5
14/12/2019 00:00	01:47:51	0.798	6.424	5.5
14/12/2019 00:00	01:48:01	0.787	6.334	5.6
14/12/2019 00:00	01:48:11	0.784	6.308	5.7
14/12/2019 00:00	01:48:21	0.794	6.391	5.7
14/12/2019 00:00	01:48:31	0.788	6.339	5.8
14/12/2019 00:00	01:48:41	0.796	6.4	5.9
14/12/2019 00:00	01:48:51	0.776	6.244	5.9
14/12/2019 00:00	01:49:01	0.782	6.291	6
14/12/2019 00:00	01:49:11	0.794	6.385	6
14/12/2019 00:00	01:49:21	0.784	6.308	6.1
14/12/2019 00:00	01:49:31	0.789	6.347	6.2
14/12/2019 00:00	01:49:41	0.782	6.289	6.2
14/12/2019 00:00	01:49:51	0.794	6.39	6.3
14/12/2019 00:00	01:50:01	0.793	6.378	6.4
14/12/2019 00:00	01:50:11	0.79	6.352	6.4
14/12/2019 00:00	01:50:21	0.78	6.272	6.5
14/12/2019 00:00	01:50:31	0.797	6.414	6.6
14/12/2019 00:00	01:50:41	0.779	6.269	6.6
14/12/2019 00:00	01:50:51	0.796	6.406	6.7
14/12/2019 00:00	01:51:01	0.8	6.435	6.7
14/12/2019 00:00	01:51:11	0.805	6.473	6.8
14/12/2019 00:00	01:51:21	0.805	6.477	6.9
14/12/2019 00:00	01:51:31	0.815	6.56	6.9
14/12/2019 00:00	01:51:41	0.79	6.354	7
14/12/2019 00:00	01:51:51	0.789	6.345	7.1
14/12/2019 00:00	01:52:01	0.789	6.349	7.1
14/12/2019 00:00	01:52:11	0.793	6.38	7.2
14/12/2019 00:00	01:52:21	0.785	6.314	7.3
14/12/2019 00:00	01:52:31	0.771	6.201	7.3
14/12/2019 00:00	01:52:41	0.768	6.178	7.4
14/12/2019 00:00	01:52:51	0.783	6.297	7.4
14/12/2019 00:00	01:53:01	0.805	6.475	7.5
14/12/2019 00:00	01:53:11	0.789	6.349	7.6
14/12/2019 00:00	01:53:21	0.789	6.344	7.6
14/12/2019 00:00	01:53:31	0.788	6.339	7.7
14/12/2019 00:00	01:53:41	0.792	6.37	7.8

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO 12



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	01:53:51	0.792	6.373	7.8
14/12/2019 00:00	01:54:01	0.795	6.397	7.9
14/12/2019 00:00	01:54:11	0.798	6.419	8
14/12/2019 00:00	01:54:21	0.793	6.379	8
14/12/2019 00:00	01:54:31	0.797	6.414	8.1
14/12/2019 00:00	01:54:41	0.788	6.34	8.1
14/12/2019 00:00	01:54:51	0.788	6.338	8.2
14/12/2019 00:00	01:55:01	0.779	6.265	8.3
14/12/2019 00:00	01:55:11	0.775	6.233	8.3
14/12/2019 00:00	01:55:21	0.802	6.45	8.4
14/12/2019 00:00	01:55:31	0.795	6.398	8.5
14/12/2019 00:00	01:55:41	0.791	6.361	8.5
14/12/2019 00:00	01:55:51	0.785	6.314	8.6
14/12/2019 00:00	01:56:01	0.797	6.408	8.7
14/12/2019 00:00	01:56:11	0.782	6.289	8.7
14/12/2019 00:00	01:56:21	0.78	6.274	8.8
14/12/2019 00:00	01:56:31	0.773	6.22	8.8
14/12/2019 00:00	01:56:41	0.78	6.272	8.9
14/12/2019 00:00	01:56:51	0.774	6.229	9
14/12/2019 00:00	01:57:01	0.785	6.319	9
14/12/2019 00:00	01:57:11	0.769	6.19	9.1
14/12/2019 00:00	01:57:21	0.786	6.322	9.2
14/12/2019 00:00	01:57:31	0.784	6.31	9.2
14/12/2019 00:00	01:57:41	0.785	6.317	9.3
14/12/2019 00:00	01:57:51	0.779	6.268	9.3
14/12/2019 00:00	01:58:01	0.781	6.28	9.4
14/12/2019 00:00	01:58:11	0.779	6.271	9.5
14/12/2019 00:00	01:58:21	0.788	6.341	9.5
14/12/2019 00:00	01:58:31	0.779	6.266	9.6
14/12/2019 00:00	01:58:41	0.77	6.198	9.7
14/12/2019 00:00	01:58:51	0.788	6.34	9.7
14/12/2019 00:00	01:59:01	0.797	6.416	9.8
14/12/2019 00:00	01:59:11	0.794	6.385	9.8
14/12/2019 00:00	01:59:21	0.768	6.175	9.9
14/12/2019 00:00	01:59:31	0.769	6.189	10
14/12/2019 00:00	01:59:41	0.786	6.324	10
14/12/2019 00:00	01:59:51	0.767	6.171	10.1
14/12/2019 00:00	02:00:01	0.796	6.402	10.2
14/12/2019 00:00	02:00:11	0.777	6.253	10.2
14/12/2019 00:00	02:00:21	0.774	6.225	10.3
14/12/2019 00:00	02:00:31	0.765	6.152	10.3

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 12



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	02:00:41	0.761	6.124	10.4
14/12/2019 00:00	02:00:51	0.798	6.424	10.5
14/12/2019 00:00	02:01:01	0.786	6.32	10.5
14/12/2019 00:00	02:01:11	0.783	6.301	10.6
14/12/2019 00:00	02:01:21	0.772	6.213	10.7
14/12/2019 00:00	02:01:31	0.776	6.241	10.7
14/12/2019 00:00	02:01:41	0.774	6.228	10.8
14/12/2019 00:00	02:01:51	0.776	6.24	10.9
14/12/2019 00:00	02:02:01	0.776	6.241	10.9
14/12/2019 00:00	02:02:11	0.775	6.233	11
14/12/2019 00:00	02:02:21	0.791	6.36	11
14/12/2019 00:00	02:02:31	0.765	6.154	11.1
14/12/2019 00:00	02:02:41	0.772	6.209	11.2
14/12/2019 00:00	02:02:51	0.776	6.245	11.2
14/12/2019 00:00	02:03:01	0.783	6.301	11.3
14/12/2019 00:00	02:03:11	0.772	6.213	11.3
14/12/2019 00:00	02:03:21	0.776	6.243	11.4
14/12/2019 00:00	02:03:31	0.773	6.217	11.5
14/12/2019 00:00	02:03:41	0.779	6.267	11.5
14/12/2019 00:00	02:03:51	0.778	6.261	11.6
14/12/2019 00:00	02:04:01	0.766	6.159	11.7
14/12/2019 00:00	02:04:11	0.77	6.197	11.7
14/12/2019 00:00	02:04:21	0.786	6.323	11.8
14/12/2019 00:00	02:04:31	0.784	6.304	11.8
14/12/2019 00:00	02:04:41	0.776	6.239	11.9
14/12/2019 00:00	02:04:51	0.773	6.222	12
14/12/2019 00:00	02:05:01	0.779	6.271	12
14/12/2019 00:00	02:05:11	0.769	6.189	12.1
14/12/2019 00:00	02:05:21	0.768	6.183	12.2
14/12/2019 00:00	02:05:31	0.762	6.129	12.2
14/12/2019 00:00	02:05:41	0.789	6.351	12.3
14/12/2019 00:00	02:05:51	0.765	6.158	12.3
14/12/2019 00:00	02:06:01	0.766	6.164	12.4
14/12/2019 00:00	02:06:11	0.792	6.372	12.5
14/12/2019 00:00	02:06:21	0.777	6.254	12.5
14/12/2019 00:00	02:06:31	0.775	6.231	12.6
14/12/2019 00:00	02:06:41	0.776	6.244	12.7
14/12/2019 00:00	02:06:51	0.758	6.099	12.7
14/12/2019 00:00	02:07:01	0.784	6.305	12.8
14/12/2019 00:00	02:07:11	0.79	6.359	12.8
14/12/2019 00:00	02:07:21	0.783	6.301	12.9

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO 12



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14/12/2019 00:00	02:07:31	0.806	6.483	13
14/12/2019 00:00	02:07:41	0.784	6.304	13
14/12/2019 00:00	02:07:51	0.795	6.397	13.1
14/12/2019 00:00	02:08:01	0.771	6.206	13.2
14/12/2019 00:00	02:08:11	0.795	6.394	13.2
14/12/2019 00:00	02:08:21	0.777	6.254	13.3
14/12/2019 00:00	02:08:31	0.785	6.318	13.4
14/12/2019 00:00	02:08:41	0.781	6.28	13.4
14/12/2019 00:00	02:08:51	0.772	6.212	13.5
14/12/2019 00:00	02:09:01	0.786	6.32	13.5
14/12/2019 00:00	02:09:11	0.781	6.283	13.6
14/12/2019 00:00	02:09:21	0.781	6.286	13.7
14/12/2019 00:00	02:09:31	0.791	6.361	13.7
14/12/2019 00:00	02:09:41	0.792	6.373	13.8
14/12/2019 00:00	02:09:51	0.784	6.304	13.9
14/12/2019 00:00	02:10:01	0.785	6.316	13.9
14/12/2019 00:00	02:10:11	0.775	6.233	14
14/12/2019 00:00	02:10:21	0.775	6.237	14
14/12/2019 00:00	02:10:31	0.781	6.283	14.1
14/12/2019 00:00	02:10:41	0.776	6.241	14.2
14/12/2019 00:00	02:10:51	0.78	6.276	14.2
14/12/2019 00:00	02:11:01	0.792	6.375	14.3
14/12/2019 00:00	02:11:11	0.806	6.488	14.4
14/12/2019 00:00	02:11:21	0.779	6.27	14.4
14/12/2019 00:00	02:11:31	0.766	6.16	14.5
14/12/2019 00:00	02:11:41	0.781	6.284	14.6
14/12/2019 00:00	02:11:51	0.769	6.189	14.6
14/12/2019 00:00	02:12:01	0.798	6.42	14.7
14/12/2019 00:00	02:12:11	0.783	6.297	14.7
14/12/2019 00:00	02:12:21	0.776	6.243	14.8
14/12/2019 00:00	02:12:31	0.783	6.299	14.9
14/12/2019 00:00	02:12:41	0.785	6.318	14.9
14/12/2019 00:00	02:12:51	0.783	6.3	15
14/12/2019 00:00	02:13:01	0.784	6.305	15.1
14/12/2019 00:00	02:13:11	0.782	6.288	15.1
14/12/2019 00:00	02:13:21	0.768	6.176	15.2
14/12/2019 00:00	02:13:31	0.778	6.259	15.2
14/12/2019 00:00	02:13:41	0.782	6.292	15.3
14/12/2019 00:00	02:13:51	0.781	6.282	15.4
14/12/2019 00:00	02:14:01	0.775	6.232	15.4
14/12/2019 00:00	02:14:11	0.773	6.218	15.5

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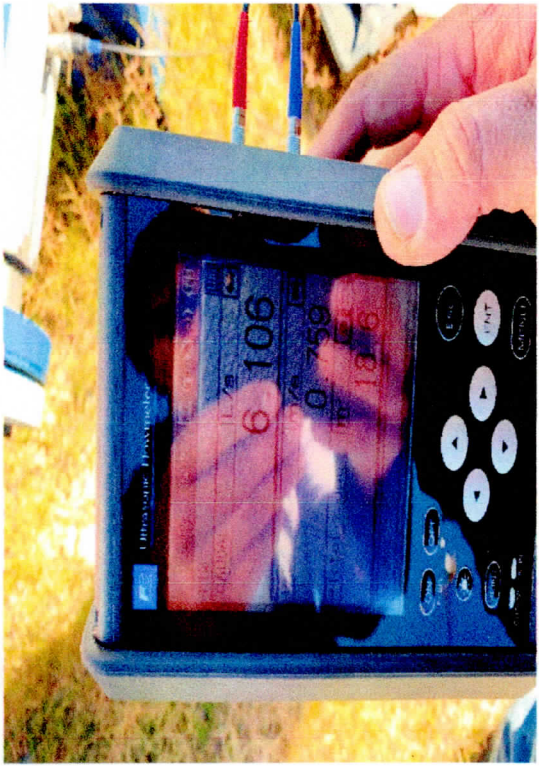
14/12/2019 00:00	02:14:21	0.767	6.174	15.6
14/12/2019 00:00	02:14:31	0.768	6.181	15.6
14/12/2019 00:00	02:14:41	0.758	6.101	15.7
14/12/2019 00:00	02:14:51	0.77	6.193	15.7
14/12/2019 00:00	02:15:01	0.757	6.086	15.8
14/12/2019 00:00	02:15:11	0.76	6.117	15.9
14/12/2019 00:00	02:15:21	0.773	6.219	15.9
14/12/2019 00:00	02:15:31	0.78	6.273	16
14/12/2019 00:00	02:15:41	0.765	6.158	16
14/12/2019 00:00	02:15:51	0.767	6.167	16.1
14/12/2019 00:00	02:16:01	0.774	6.223	16.2
14/12/2019 00:00	02:16:11	0.769	6.183	16.2
14/12/2019 00:00	02:16:21	0.772	6.208	16.3
14/12/2019 00:00	02:16:31	0.775	6.232	16.4
14/12/2019 00:00	02:16:41	0.789	6.345	16.4
14/12/2019 00:00	02:16:51	0.775	6.232	16.5
14/12/2019 00:00	02:17:01	0.776	6.245	16.5
14/12/2019 00:00	02:17:11	0.778	6.259	16.6
14/12/2019 00:00	02:17:21	0.78	6.271	16.7
14/12/2019 00:00	02:17:31	0.774	6.226	16.7
14/12/2019 00:00	02:17:41	0.783	6.299	16.8
14/12/2019 00:00	02:17:51	0.778	6.262	16.9
14/12/2019 00:00	02:18:01	0.764	6.143	16.9
14/12/2019 00:00	02:18:11	0.778	6.256	17
14/12/2019 00:00	02:18:21	0.793	6.377	17
14/12/2019 00:00	02:18:31	0.779	6.27	17.1
14/12/2019 00:00	02:18:41	0.761	6.122	17.2
14/12/2019 00:00	02:18:51	0.765	6.157	17.2
14/12/2019 00:00	02:19:01	0.788	6.343	17.3
14/12/2019 00:00	02:19:11	0.774	6.223	17.4
14/12/2019 00:00	02:19:21	0.795	6.398	17.4
14/12/2019 00:00	02:19:31	0.782	6.291	17.5
14/12/2019 00:00	02:19:41	0.78	6.272	17.5
14/12/2019 00:00	02:19:51	0.774	6.229	17.6
14/12/2019 00:00	02:20:01	0.778	6.256	17.7
14/12/2019 00:00	02:20:11	0.774	6.228	17.7
14/12/2019 00:00	02:20:21	0.772	6.211	17.8
14/12/2019 00:00	02:20:31	0.781	6.284	17.9
14/12/2019 00:00	02:20:41	0.768	6.179	17.9
14/12/2019 00:00	02:20:51	0.77	6.194	18
14/12/2019 00:00	02:21:01	0.766	6.159	18

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POZO 12



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14/12/2019 00:00	02:21:11	0.747	6.01	18.1
14/12/2019 00:00	02:21:21	0.762	6.133	18.2
14/12/2019 00:00	02:21:31	0.762	6.134	18.2
14/12/2019 00:00	02:21:41	0.765	6.15	18.3
14/12/2019 00:00	02:21:51	0.753	6.06	18.3
14/12/2019 00:00	02:22:01	0.774	6.229	18.4
14/12/2019 00:00	02:22:11	0.778	6.259	18.5
14/12/2019 00:00	02:22:21	0.763	6.14	18.5
14/12/2019 00:00	02:22:31	0.775	6.236	18.6





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MATEHUALA POZO 14



ING. JOSE SANTOS ESCAMILLA LOPEZ

Proyecto: FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES

No. Sitio:	Pozo 14	Fuente de Abastecimiento:	
Sector:		Fecha de Inicio de Registro:	12 de Dic 2019
Calle:		Fecha de fin de registro:	12 de Dic 2019
Colonia:		Hora:	11:33
GPS:	Latitud 23°50'26.10"N 60 min Estiaje:	Longitud 100°44'32.10"W	Altitud: 1708 MSNM

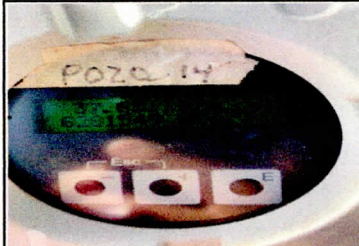
Tiempo de Op. Tiempo sin Operación:

MEDIDOR			
Tipo:	Caudalimetro por ultrasonico	Modelo	Portaflow X
		No. Serie	S10A2-00Y
Caudal Puntual:	38.7 LPS	No. De Medidor Ultrasonico	S/M
		Modelo	

GRÁFICA DE CAUDAL



Fotografía del macro medidor



Fotografía del medidor ultrasonico



Referencias del sitio de Medición:

Observaciones:

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO 14



ING. JOSE SANTOS ESCAMILLA LOPEZ

4	'VELOCITY	'FLOW RATE	'+TOTALIZER
	m/s	L/s	m3
13/12/2019 02:28	0.925	30.005	4.6
13/12/2019 02:28	0.913	29.634	4.9
13/12/2019 02:29	0.924	29.972	5.2
13/12/2019 02:29	0.99	32.124	5.5
13/12/2019 02:29	0.936	30.356	5.8
13/12/2019 02:29	0.923	29.933	6.1
13/12/2019 02:29	0.954	30.951	6.4
13/12/2019 02:29	0.917	29.762	6.7
13/12/2019 02:30	0.951	30.847	7
13/12/2019 02:30	0.97	31.46	7.3
13/12/2019 02:30	0.924	29.966	7.6
13/12/2019 02:30	0.939	30.474	7.9
13/12/2019 02:30	0.933	30.285	8.2
13/12/2019 02:30	0.941	30.534	8.5
13/12/2019 02:31	0.946	30.7	8.8
13/12/2019 02:31	0.939	30.467	9.1
13/12/2019 02:31	0.941	30.539	9.5
13/12/2019 02:31	0.937	30.399	9.8
13/12/2019 02:31	0.961	31.19	10.1
13/12/2019 02:31	0.928	30.109	10.4
13/12/2019 02:32	0.922	29.925	10.7
13/12/2019 02:32	0.938	30.432	11
13/12/2019 02:32	0.917	29.765	11.3
13/12/2019 02:32	0.949	30.791	11.6
13/12/2019 02:32	0.916	29.721	11.9
13/12/2019 02:32	0.91	29.527	12.2
13/12/2019 02:33	0.963	31.261	12.5
13/12/2019 02:33	0.919	29.823	12.8
13/12/2019 02:33	0.936	30.366	13.1
13/12/2019 02:33	0.938	30.438	13.4
13/12/2019 02:33	0.955	30.987	13.7
13/12/2019 02:33	0.949	30.806	14
13/12/2019 02:34	0.947	30.732	14.3
13/12/2019 02:34	0.958	31.087	14.6
13/12/2019 02:34	0.93	30.167	14.9
13/12/2019 02:34	0.925	30.005	15.2
13/12/2019 02:34	0.943	30.587	15.5
13/12/2019 02:34	0.97	31.474	15.8

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO 14



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13/12/2019 02:35	0.948	30.762	16.1
13/12/2019 02:35	0.96	31.155	16.4
13/12/2019 02:35	0.938	30.431	16.7
13/12/2019 02:35	0.946	30.703	17.1
13/12/2019 02:35	0.93	30.166	17.4
13/12/2019 02:35	0.938	30.421	17.7
13/12/2019 02:36	0.95	30.838	18
13/12/2019 02:36	0.924	29.984	18.3
13/12/2019 02:36	0.953	30.919	18.6
13/12/2019 02:36	0.954	30.942	18.9
13/12/2019 02:36	0.956	31.023	19.2
13/12/2019 02:36	0.944	30.624	19.5
13/12/2019 02:37	0.928	30.124	19.8
13/12/2019 02:37	0.93	30.163	20.1
13/12/2019 02:37	0.964	31.271	20.4
13/12/2019 02:37	0.96	31.14	20.7
13/12/2019 02:37	0.95	30.813	21
13/12/2019 02:37	0.943	30.594	21.3
13/12/2019 02:38	0.952	30.893	21.7
13/12/2019 02:38	0.957	31.055	22
13/12/2019 02:38	0.942	30.562	22.3
13/12/2019 02:38	0.946	30.69	22.6
13/12/2019 02:38	0.972	31.521	22.9
13/12/2019 02:38	0.939	30.453	23.2
13/12/2019 02:39	0.966	31.351	23.5
13/12/2019 02:39	0.954	30.937	23.8
13/12/2019 02:39	0.951	30.849	24.1
13/12/2019 02:39	0.954	30.963	24.4
13/12/2019 02:39	0.94	30.511	24.7
13/12/2019 02:39	0.935	30.327	25
13/12/2019 02:40	0.962	31.21	25.3
13/12/2019 02:40	0.947	30.733	25.7
13/12/2019 02:40	0.959	31.105	26
13/12/2019 02:40	0.926	30.056	26.3
13/12/2019 02:40	0.951	30.87	26.6
13/12/2019 02:40	0.951	30.852	26.9
13/12/2019 02:41	0.921	29.878	27.2
13/12/2019 02:41	0.93	30.186	27.5
13/12/2019 02:41	0.946	30.684	27.8
13/12/2019 02:41	0.908	29.453	28.1
13/12/2019 02:41	0.969	31.453	28.4

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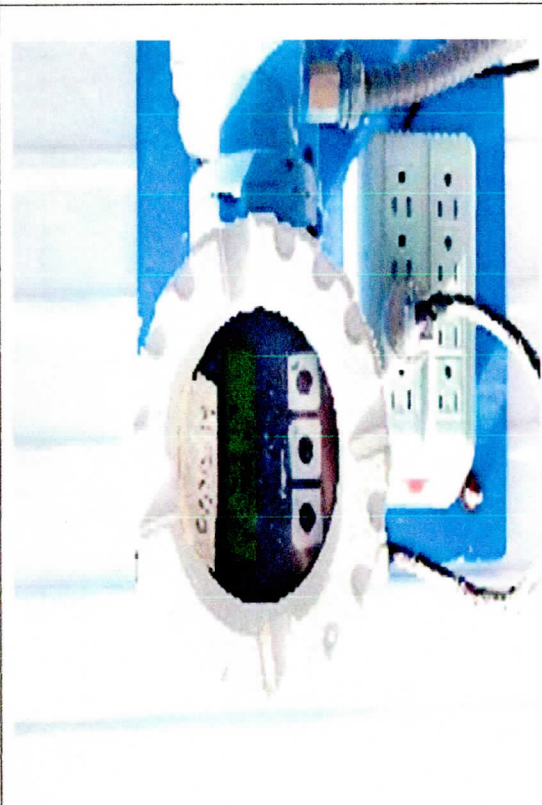
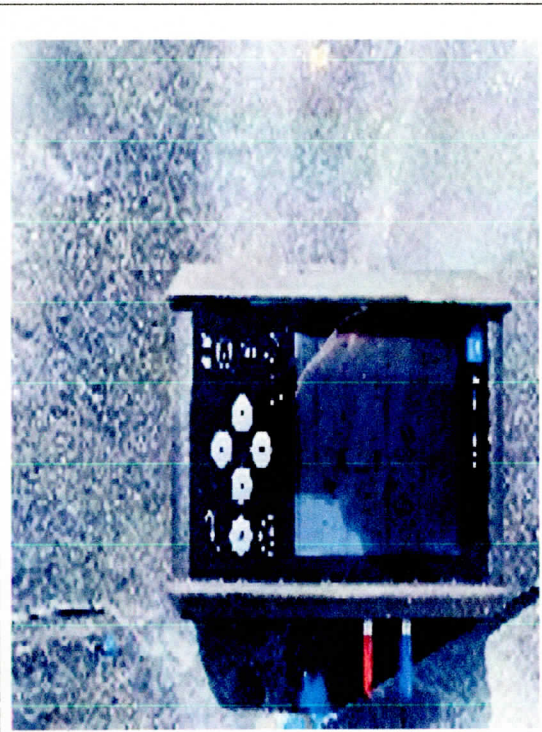
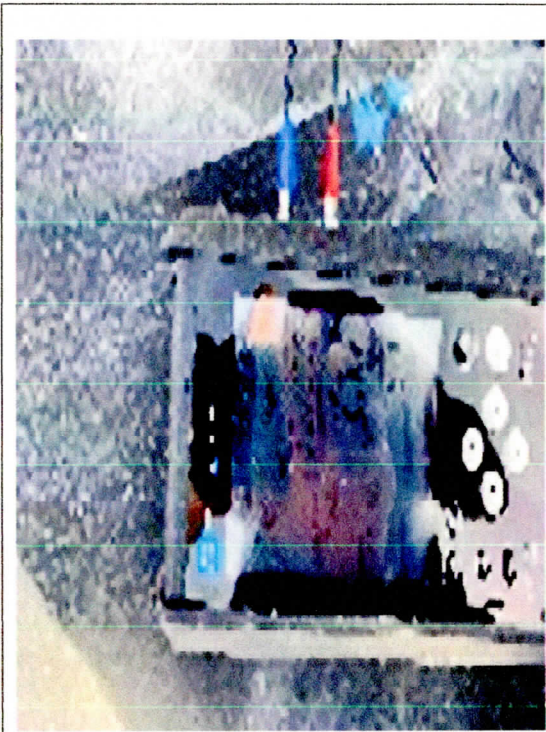
13/12/2019 02:41	0.95	30.833	28.7
13/12/2019 02:42	0.941	30.542	29
13/12/2019 02:42	0.943	30.612	29.3
13/12/2019 02:42	0.96	31.136	29.6
13/12/2019 02:42	0.954	30.949	30
13/12/2019 02:42	0.951	30.864	30.3
13/12/2019 02:42	0.928	30.1	30.6
13/12/2019 02:43	0.943	30.609	30.9
13/12/2019 02:43	0.957	31.042	31.2
13/12/2019 02:43	0.958	31.085	31.5
13/12/2019 02:43	0.942	30.553	31.8
13/12/2019 02:43	0.922	29.904	32.1
13/12/2019 02:43	0.907	29.442	32.4
13/12/2019 02:44	0.924	29.973	32.7
13/12/2019 02:44	0.929	30.141	33
13/12/2019 02:44	0.916	29.723	33.3
13/12/2019 02:44	0.964	31.263	33.6
13/12/2019 02:44	0.947	30.725	33.9
13/12/2019 02:44	0.934	30.32	34.2
13/12/2019 02:45	0.934	30.303	34.5
13/12/2019 02:45	0.95	30.818	34.8
13/12/2019 02:45	0.931	30.221	35.1
13/12/2019 02:45	0.962	31.215	35.4
13/12/2019 02:45	0.965	31.313	35.8
13/12/2019 02:45	0.976	31.679	36.1
13/12/2019 02:46	0.965	31.325	36.4
13/12/2019 02:46	0.956	31.031	36.7
13/12/2019 02:46	0.958	31.076	37
13/12/2019 02:46	0.902	29.26	37.3
13/12/2019 02:46	0.923	29.95	37.6
13/12/2019 02:46	0.953	30.906	37.9
13/12/2019 02:47	0.971	31.504	38.2
13/12/2019 02:47	0.946	30.693	38.5
13/12/2019 02:47	0.954	30.94	38.8
13/12/2019 02:47	0.946	30.706	39.2
13/12/2019 02:47	0.942	30.554	39.5
13/12/2019 02:47	0.945	30.672	39.8
13/12/2019 02:48	1.017	33.005	40.1
13/12/2019 02:48	1.07	34.729	40.4
13/12/2019 02:48	1.1	35.704	40.8
13/12/2019 02:48	1.118	36.269	41.1

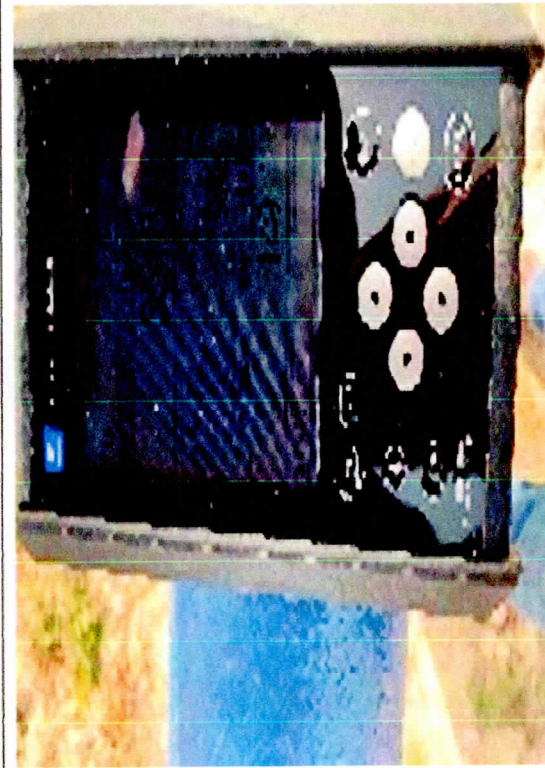
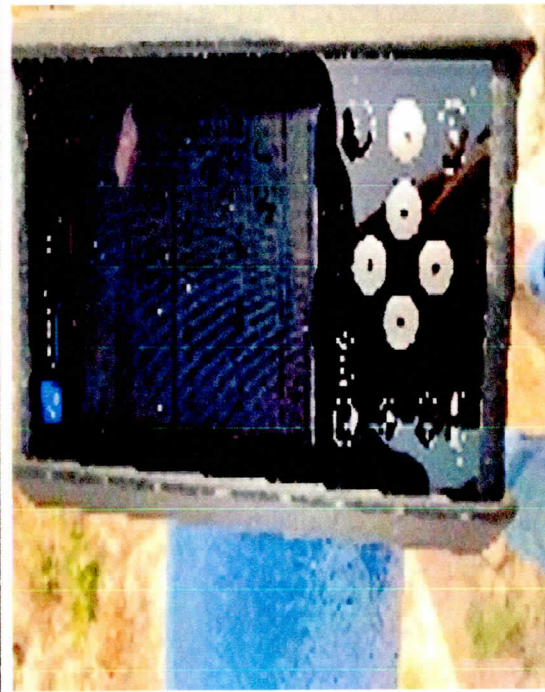
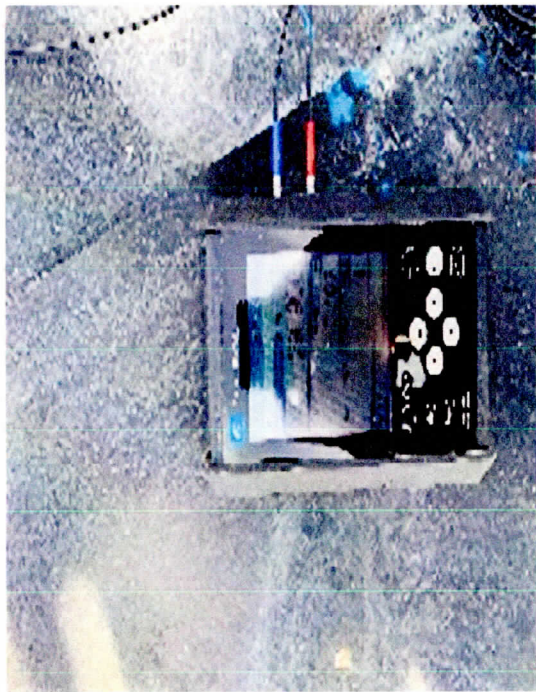
IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
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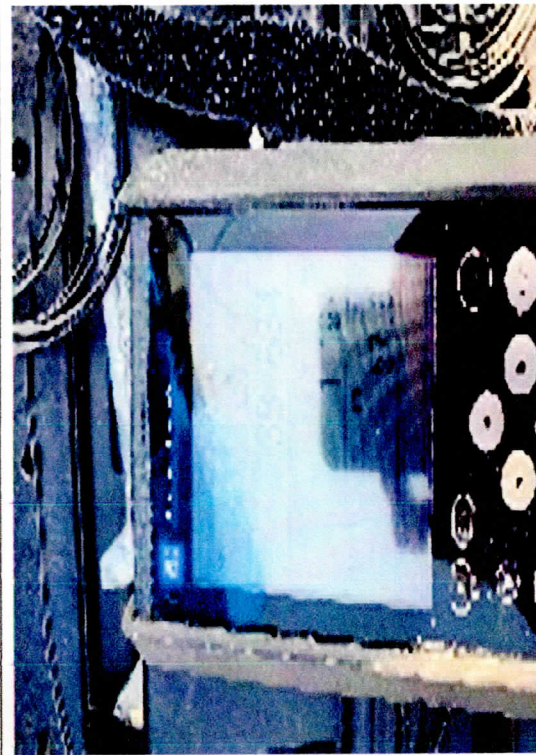
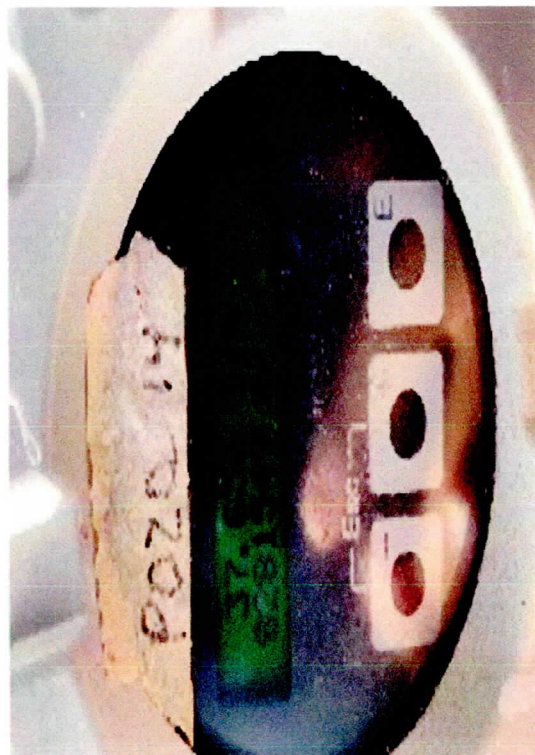


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13/12/2019 02:48	0.941	30.537	41.5
13/12/2019 02:48	0.983	31.893	41.8
13/12/2019 02:49	1.114	36.149	42.1
13/12/2019 02:49	1.096	35.561	42.5
13/12/2019 02:49	1.109	35.982	42.8
13/12/2019 02:49	1.07	34.706	43.2
13/12/2019 02:49	1.087	35.275	43.6
13/12/2019 02:49	1.071	34.732	43.9
13/12/2019 02:50	1.087	35.271	44.3
13/12/2019 02:50	1.084	35.167	44.6
13/12/2019 02:50	1.063	34.497	45
13/12/2019 02:50	1.084	35.184	45.3
13/12/2019 02:50	1.096	35.558	45.7
13/12/2019 02:50	1.053	34.159	46
13/12/2019 02:51	1.088	35.302	46.4
13/12/2019 02:51	1.071	34.731	46.7
13/12/2019 02:51	1.095	35.535	47.1
13/12/2019 02:51	1.09	35.364	47.4
13/12/2019 02:51	1.089	35.326	47.8
13/12/2019 02:51	1.102	35.741	48.1
13/12/2019 02:52	1.08	35.039	48.5
13/12/2019 02:52	0.976	31.66	48.8
13/12/2019 02:52	1.06	34.378	49.1
13/12/2019 02:52	1.079	35.012	49.5
13/12/2019 02:52	1.092	35.444	49.8
13/12/2019 02:52	0.929	30.131	50.2
13/12/2019 02:53	0.936	30.37	50.5
13/12/2019 02:53	0.96	31.141	50.8
13/12/2019 02:53	1.011	32.81	51.1
13/12/2019 02:53	0.945	30.668	51.4
13/12/2019 02:53	1.074	34.835	51.7
13/12/2019 02:53	0.918	29.773	52.1
13/12/2019 02:54	0.851	27.618	52.4
13/12/2019 02:54	0.816	26.481	52.6
13/12/2019 02:54	0.991	32.153	52.9
13/12/2019 02:54	1.001	32.472	53.3
13/12/2019 02:54	0.999	32.42	53.6









IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA MATEHUALA POZO 16

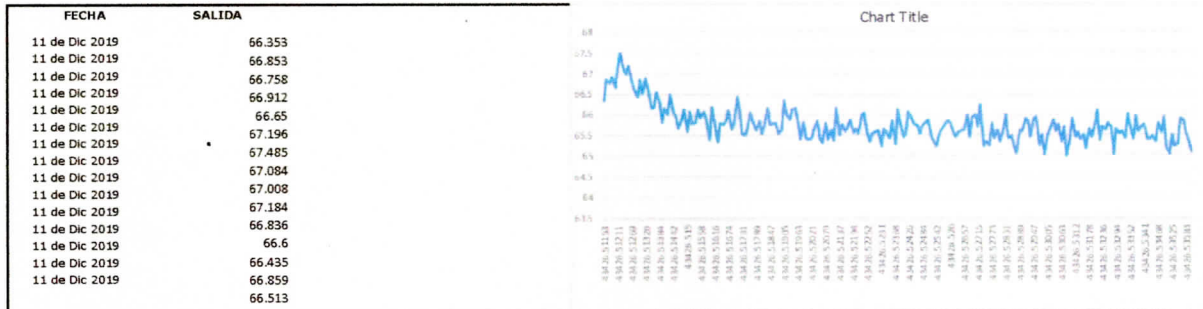


ING. JOSE SANTOS ESCAMILLA LOPEZ

FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES			
Proyecto:			
No. Sitio:	Pozo 16		Fuente de Abastecimiento:
Sector:			Fecha de Inicio de Registro: 11 de Dic 2019
Calle:			Fecha de fin de registro: 11 de Dic 2019
Colonia:			Hora: 11:31
GPS:	Latitud 23°50'20.40"N	Longitud 100°44'20.20"W	Altitud: 1707 MSNM
	60 min	Estiaje:	

Tiempo de Op.		Tiempo sin Operación:	
MEDIDOR			
Tipo:	Caudalmetro por ultrasonico	Modelo	Portaflow X
		No. Serie	S10A2-00Y
Caudal Puntual:	40.5 LPS	No. De Medidor Ultrasonico	S/M
		Modelo	

GRÁFICA DE CAUDAL



Referencias del sitio de Medición: Las mediciones se efectuaron sobre la tubería descubierta de la tubería, tomando en cuenta las recomendaciones para las mediciones ultrasonicas.

Observaciones: Las mediciones se efectuaron en un lapso de 60 min sin interrupciones, sin variaciones de velocidad de flujo considerables



4	'VELOCITY	'FLOW RATE	'+TOTALIZER
	m/s	L/s	m3
13/12/2019 01:35	1.263	40.978	17.1
13/12/2019 01:36	1.245	40.378	17.5
13/12/2019 01:36	1.269	41.16	17.9
13/12/2019 01:36	1.238	40.174	18.3
13/12/2019 01:36	1.225	39.749	18.7
13/12/2019 01:36	1.239	40.204	19.1
13/12/2019 01:36	1.24	40.212	19.5
13/12/2019 01:37	1.245	40.385	19.9
13/12/2019 01:37	1.242	40.28	20.3
13/12/2019 01:37	1.236	40.103	20.7
13/12/2019 01:37	1.245	40.403	21.1
13/12/2019 01:37	1.227	39.802	21.5
13/12/2019 01:37	1.236	40.09	21.9
13/12/2019 01:38	1.26	40.884	22.3
13/12/2019 01:38	1.236	40.091	22.7
13/12/2019 01:38	1.25	40.557	23.1
13/12/2019 01:38	1.271	41.232	23.5
13/12/2019 01:38	1.262	40.957	23.9
13/12/2019 01:38	1.253	40.638	24.3
13/12/2019 01:39	1.245	40.375	24.7
13/12/2019 01:39	1.264	40.993	25.1
13/12/2019 01:39	1.258	40.802	25.5
13/12/2019 01:39	1.253	40.649	26
13/12/2019 01:39	1.24	40.228	26.4
13/12/2019 01:39	1.252	40.626	26.8
13/12/2019 01:40	1.272	41.252	27.2
13/12/2019 01:40	1.256	40.761	27.6
13/12/2019 01:40	1.258	40.827	28
13/12/2019 01:40	1.268	41.152	28.4
13/12/2019 01:40	1.252	40.629	28.8
13/12/2019 01:40	1.25	40.555	29.2
13/12/2019 01:41	1.248	40.493	29.6
13/12/2019 01:41	1.26	40.87	30
13/12/2019 01:41	1.266	41.059	30.4
13/12/2019 01:41	1.26	40.878	30.8
13/12/2019 01:41	1.285	41.7	31.2
13/12/2019 01:41	1.262	40.933	31.7
13/12/2019 01:42	1.252	40.601	32.1

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO 16



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13/12/2019 01:42	1.275	41.366	32.5
13/12/2019 01:42	1.265	41.031	32.9
13/12/2019 01:42	1.262	40.938	33.3
13/12/2019 01:42	1.273	41.289	33.7
13/12/2019 01:42	1.258	40.796	34.1
13/12/2019 01:43	1.282	41.578	34.5
13/12/2019 01:43	1.273	41.31	34.9
13/12/2019 01:43	1.266	41.069	35.4
13/12/2019 01:43	1.279	41.491	35.8
13/12/2019 01:43	1.252	40.61	36.2
13/12/2019 01:43	1.26	40.891	36.6
13/12/2019 01:44	1.28	41.541	37
13/12/2019 01:44	1.266	41.085	37.4
13/12/2019 01:44	1.259	40.837	37.8
13/12/2019 01:44	1.264	41.016	38.2
13/12/2019 01:44	1.252	40.61	38.6
13/12/2019 01:44	1.258	40.821	39.1
13/12/2019 01:45	1.258	40.819	39.5
13/12/2019 01:45	1.261	40.916	39.9
13/12/2019 01:45	1.255	40.714	40.3
13/12/2019 01:45	1.259	40.837	40.7
13/12/2019 01:45	1.285	41.699	41.1
13/12/2019 01:45	1.296	42.034	41.5
13/12/2019 01:46	1.253	40.635	41.9
13/12/2019 01:46	1.256	40.753	42.3
13/12/2019 01:46	1.256	40.748	42.7
13/12/2019 01:46	1.265	41.041	43.2
13/12/2019 01:46	1.255	40.712	43.6
13/12/2019 01:46	1.257	40.774	44
13/12/2019 01:47	1.265	41.036	44.4
13/12/2019 01:47	1.249	40.507	44.8
13/12/2019 01:47	1.263	40.979	45.2
13/12/2019 01:47	1.265	41.046	45.6
13/12/2019 01:47	1.255	40.704	46
13/12/2019 01:47	1.262	40.93	46.4
13/12/2019 01:48	1.249	40.51	46.8
13/12/2019 01:48	1.274	41.327	47.2
13/12/2019 01:48	1.274	41.324	47.6
13/12/2019 01:48	1.254	40.678	48.1
13/12/2019 01:48	1.259	40.83	48.5
13/12/2019 01:48	1.243	40.341	48.9

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO 16



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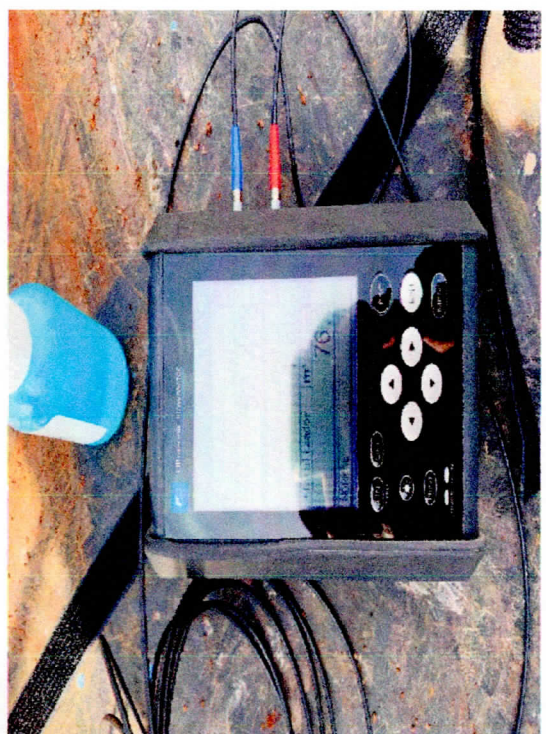
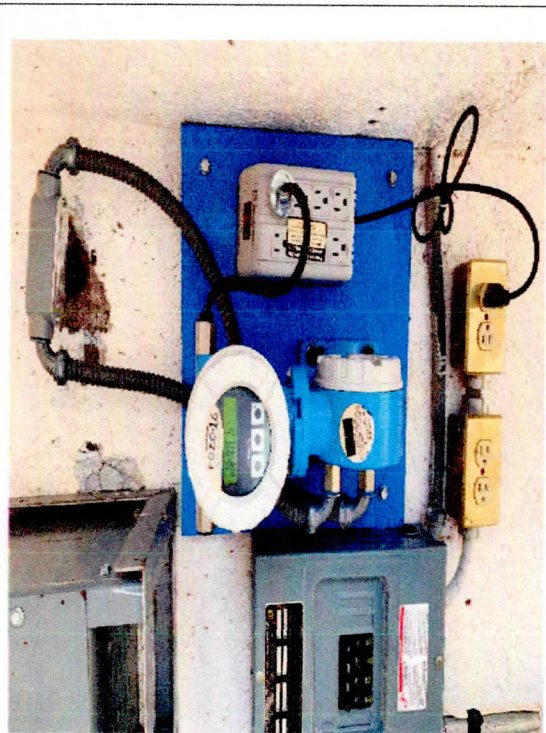
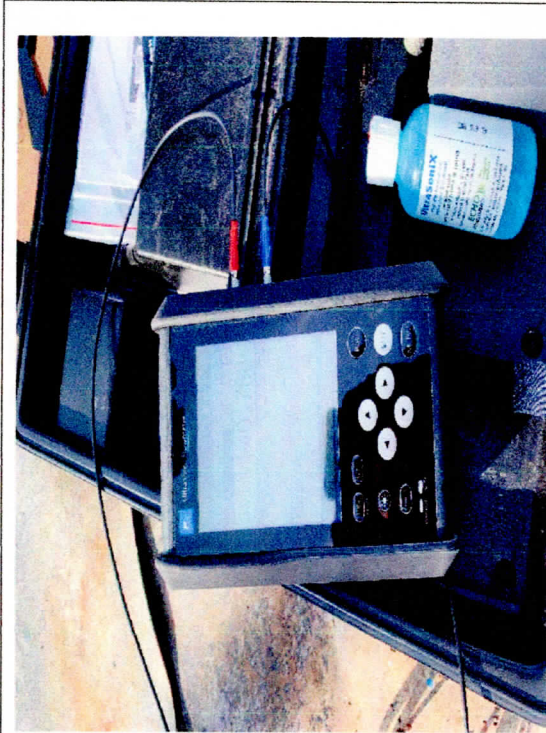
13/12/2019 01:49	1.26	40.882	49.3
13/12/2019 01:49	1.264	41.019	49.7
13/12/2019 01:49	1.229	39.876	50.1
13/12/2019 01:49	1.237	40.147	50.5
13/12/2019 01:49	1.243	40.31	50.9
13/12/2019 01:49	1.242	40.297	51.3
13/12/2019 01:50	1.263	40.983	51.7
13/12/2019 01:50	1.247	40.44	52.1
13/12/2019 01:50	1.238	40.156	52.5
13/12/2019 01:50	1.231	39.927	52.9
13/12/2019 01:50	1.247	40.466	53.3
13/12/2019 01:50	1.261	40.917	53.7
13/12/2019 01:51	1.24	40.232	54.1
13/12/2019 01:51	1.256	40.744	54.5
13/12/2019 01:51	1.231	39.928	54.9
13/12/2019 01:51	1.248	40.502	55.3
13/12/2019 01:51	1.233	39.993	55.7
13/12/2019 01:51	1.219	39.536	56.1
13/12/2019 01:52	1.24	40.214	56.5
13/12/2019 01:52	1.223	39.666	56.9
13/12/2019 01:52	1.239	40.205	57.3
13/12/2019 01:52	1.236	40.111	57.7
13/12/2019 01:52	1.228	39.826	58.1
13/12/2019 01:52	1.223	39.674	58.5
13/12/2019 01:53	1.218	39.507	58.9
13/12/2019 01:53	1.223	39.688	59.3
13/12/2019 01:53	1.241	40.246	59.7
13/12/2019 01:53	1.217	39.485	60.1
13/12/2019 01:53	1.231	39.936	60.5
13/12/2019 01:53	1.238	40.148	60.9
13/12/2019 01:54	1.246	40.437	61.3
13/12/2019 01:54	1.235	40.07	61.7
13/12/2019 01:54	1.229	39.882	62.1
13/12/2019 01:54	1.219	39.554	62.5
13/12/2019 01:54	1.231	39.922	62.9
13/12/2019 01:54	1.222	39.659	63.3
13/12/2019 01:55	1.228	39.852	63.7
13/12/2019 01:55	1.239	40.205	64.1
13/12/2019 01:55	1.241	40.274	64.5
13/12/2019 01:55	1.226	39.77	64.9
13/12/2019 01:55	1.255	40.729	65.3

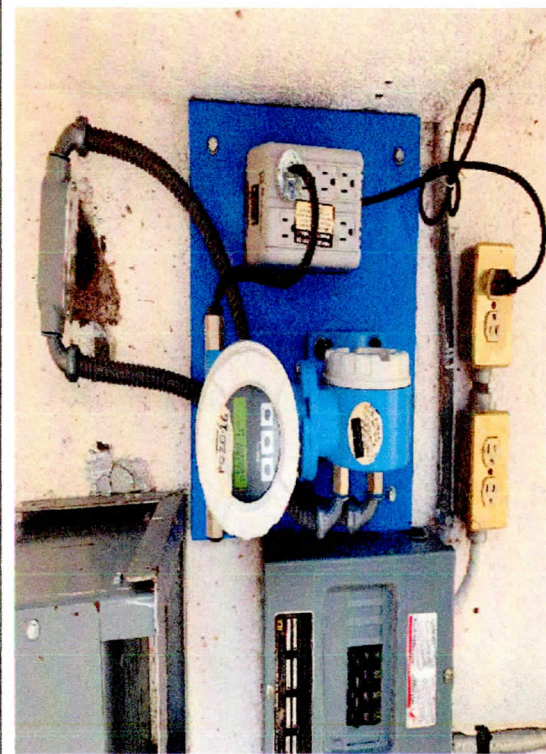
IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 16



ING. JOSE SANTOS ESCAMILLA LOPEZ

13/12/2019 01:55	1.228	39.835	65.7
13/12/2019 01:56	1.235	40.08	66.1
13/12/2019 01:56	1.254	40.673	66.5
13/12/2019 01:56	1.218	39.522	66.9
13/12/2019 01:56	1.248	40.49	67.3
13/12/2019 01:56	1.226	39.783	67.7
13/12/2019 01:56	1.233	39.989	68.1
13/12/2019 01:57	1.235	40.065	68.5
13/12/2019 01:57	1.228	39.824	68.9
13/12/2019 01:57	1.245	40.387	69.3
13/12/2019 01:57	1.237	40.147	69.7
13/12/2019 01:57	1.205	39.106	70.1
13/12/2019 01:57	1.224	39.707	70.5
13/12/2019 01:58	1.221	39.615	70.9
13/12/2019 01:58	1.237	40.121	71.3
13/12/2019 01:58	1.217	39.483	71.7
13/12/2019 01:58	1.253	40.659	72.1
13/12/2019 01:58	1.214	39.391	72.5



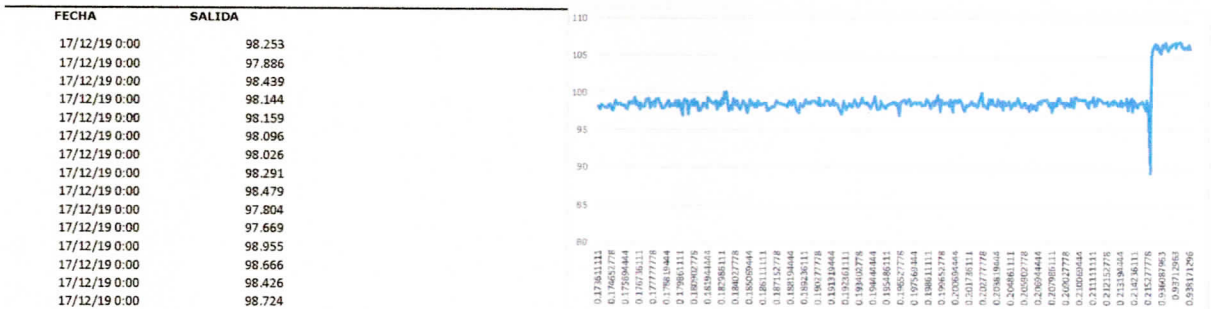



**IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
MATEHUALA POZO 19**

FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES				
Proyecto:				
No. Sitio:	Pozo 19 Cloración Punto de Inspección	Fuente de Abastecimiento:		
Sector:		Fecha de Inicio de Registro:	17 Dic 2019	
Calle:		Fecha de fin de registro:	18 Dic 2019	
Colonia:		Hora:	4:10	
GPS:	Latitud	Longitud	Altitud:	MSNM
	60 min			

Tiempo de Op.	Estiaje:	Tiempo sin Operación:			
MEDIDOR					
Tipo:	Caudalmetro por ultrasonico	Modelo	Portaflow X	No. Serie	S10A2-00Y
Caudal Puntual:	99 LPS	No. De Medidor Ultrasonico	5/M	Modelo	

GRÁFICA DE CAUDAL



Fotografía del macro medidor	Fotografía del medidor ultrasonico
<p>No cuenta con macro medidor</p>	
Referencias del sitio de Medición:	
Observaciones:	



4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
17/12/2019 00:00	04:10:00	0.843	98.253	17.7
17/12/2019 00:00	04:10:10	0.84	97.886	18.6
17/12/2019 00:00	04:10:20	0.845	98.439	19.6
17/12/2019 00:00	04:10:30	0.843	98.144	20.6
17/12/2019 00:00	04:10:40	0.843	98.159	21.6
17/12/2019 00:00	04:10:50	0.842	98.096	22.6
17/12/2019 00:00	04:11:00	0.842	98.026	23.5
17/12/2019 00:00	04:11:10	0.844	98.291	24.5
17/12/2019 00:00	04:11:20	0.845	98.479	25.5
17/12/2019 00:00	04:11:30	0.84	97.804	26.5
17/12/2019 00:00	04:11:40	0.838	97.669	27.5
17/12/2019 00:00	04:11:50	0.85	98.955	28.5
17/12/2019 00:00	04:12:00	0.847	98.666	29.5
17/12/2019 00:00	04:12:10	0.845	98.426	30.4
17/12/2019 00:00	04:12:20	0.848	98.724	31.4
17/12/2019 00:00	04:12:30	0.845	98.425	32.4
17/12/2019 00:00	04:12:40	0.844	98.299	33.4
17/12/2019 00:00	04:12:50	0.844	98.278	34.4
17/12/2019 00:00	04:13:00	0.842	98.054	35.3
17/12/2019 00:00	04:13:10	0.84	97.866	36.3
17/12/2019 00:00	04:13:20	0.848	98.733	37.3
17/12/2019 00:00	04:13:30	0.847	98.618	38.3
17/12/2019 00:00	04:13:40	0.848	98.803	39.3
17/12/2019 00:00	04:13:50	0.847	98.641	40.3
17/12/2019 00:00	04:14:00	0.853	99.375	41.3
17/12/2019 00:00	04:14:10	0.845	98.447	42.3
17/12/2019 00:00	04:14:20	0.848	98.746	43.3
17/12/2019 00:00	04:14:30	0.84	97.827	44.2
17/12/2019 00:00	04:14:40	0.847	98.684	45.2
17/12/2019 00:00	04:14:50	0.843	98.245	46.2
17/12/2019 00:00	04:15:00	0.842	98.116	47.2
17/12/2019 00:00	04:15:10	0.848	98.784	48.1
17/12/2019 00:00	04:15:20	0.851	99.077	48.8
17/12/2019 00:00	04:15:30	0.852	99.269	49.7
17/12/2019 00:00	04:15:40	0.842	98.056	50.7
17/12/2019 00:00	04:15:50	0.845	98.422	51.7

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 19



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17/12/2019 00:00	04:16:00	0.848	98.778	52.7
17/12/2019 00:00	04:16:10	0.843	98.157	53.7
17/12/2019 00:00	04:16:20	0.851	99.112	54.6
17/12/2019 00:00	04:16:30	0.853	99.309	55.6
17/12/2019 00:00	04:16:40	0.849	98.874	56.6
17/12/2019 00:00	04:16:50	0.847	98.67	57.6
17/12/2019 00:00	04:17:00	0.842	98.056	58.6
17/12/2019 00:00	04:17:10	0.842	98.078	59.6
17/12/2019 00:00	04:17:20	0.842	98.129	60.6
17/12/2019 00:00	04:17:30	0.844	98.272	61.6
17/12/2019 00:00	04:17:40	0.849	98.905	62.6
17/12/2019 00:00	04:17:50	0.843	98.165	63.6
17/12/2019 00:00	04:18:00	0.847	98.619	64.5
17/12/2019 00:00	04:18:10	0.844	98.266	65.5
17/12/2019 00:00	04:18:20	0.844	98.308	66.5
17/12/2019 00:00	04:18:30	0.849	98.916	67.5
17/12/2019 00:00	04:18:40	0.843	98.151	68.5
17/12/2019 00:00	04:18:50	0.849	98.91	69.4
17/12/2019 00:00	04:19:00	0.847	98.61	70.4
17/12/2019 00:00	04:19:10	0.834	97.166	71.4
17/12/2019 00:00	04:19:20	0.847	98.685	72.4
17/12/2019 00:00	04:19:30	0.852	99.189	73.4
17/12/2019 00:00	04:19:40	0.849	98.946	74.4
17/12/2019 00:00	04:19:50	0.835	97.279	75.4
17/12/2019 00:00	04:20:00	0.844	98.348	76.4
17/12/2019 00:00	04:20:10	0.849	98.891	77.3
17/12/2019 00:00	04:20:20	0.845	98.408	78.3
17/12/2019 00:00	04:20:30	0.851	99.163	79.3
17/12/2019 00:00	04:20:40	0.844	98.356	80.3
17/12/2019 00:00	04:20:50	0.848	98.737	81.3
17/12/2019 00:00	04:21:00	0.839	97.748	82.3
17/12/2019 00:00	04:21:10	0.839	97.784	83.2
17/12/2019 00:00	04:21:20	0.843	98.145	84.2
17/12/2019 00:00	04:21:30	0.847	98.695	85.2
17/12/2019 00:00	04:21:40	0.847	98.706	86.2
17/12/2019 00:00	04:21:50	0.842	98.023	87.2
17/12/2019 00:00	04:22:00	0.851	99.411	88
17/12/2019 00:00	04:22:10	0.85	99.291	88.8
17/12/2019 00:00	04:22:20	0.846	98.802	89.8
17/12/2019 00:00	04:22:30	0.844	98.606	90.7

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 POZO 19



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17/12/2019 00:00	04:22:40	0.845	98.643	91.7
17/12/2019 00:00	04:22:50	0.847	98.943	92.7
17/12/2019 00:00	04:23:00	0.838	97.91	93.7
17/12/2019 00:00	04:23:10	0.845	98.738	94.7
17/12/2019 00:00	04:23:20	0.842	98.34	95.6
17/12/2019 00:00	04:23:30	0.85	99.325	96.7
17/12/2019 00:00	04:23:40	0.844	98.571	97.7
17/12/2019 00:00	04:23:50	0.857	100.093	98.7
17/12/2019 00:00	04:24:00	0.857	100.132	99.5
17/12/2019 00:00	04:24:10	0.846	98.797	100.5
17/12/2019 00:00	04:24:20	0.836	97.668	101.5
17/12/2019 00:00	04:24:30	0.842	98.304	102.5
17/12/2019 00:00	04:24:40	0.837	97.797	103.5
17/12/2019 00:00	04:24:50	0.85	99.236	104.4
17/12/2019 00:00	04:25:00	0.843	98.438	105.4
17/12/2019 00:00	04:25:10	0.848	98.977	106.4
17/12/2019 00:00	04:25:20	0.841	98.196	107.4
17/12/2019 00:00	04:25:30	0.838	97.854	108.4
17/12/2019 00:00	04:25:40	0.844	98.545	109.4
17/12/2019 00:00	04:25:50	0.848	99.02	110.4
17/12/2019 00:00	04:26:00	0.845	98.631	111.4
17/12/2019 00:00	04:26:10	0.839	98.011	112.3
17/12/2019 00:00	04:26:20	0.835	97.476	113.3
17/12/2019 00:00	04:26:30	0.849	99.141	114.3
17/12/2019 00:00	04:26:40	0.843	98.468	115.3
17/12/2019 00:00	04:26:50	0.846	98.788	116.3
17/12/2019 00:00	04:27:00	0.841	98.215	117.3
17/12/2019 00:00	04:27:10	0.845	98.641	118.2
17/12/2019 00:00	04:27:20	0.84	98.108	119.2
17/12/2019 00:00	04:27:30	0.848	99.02	120.2
17/12/2019 00:00	04:27:40	0.843	98.501	121.2
17/12/2019 00:00	04:27:50	0.843	98.506	122.2
17/12/2019 00:00	04:28:00	0.845	98.711	123.1
17/12/2019 00:00	04:28:10	0.845	98.693	124.2
17/12/2019 00:00	04:28:20	0.845	98.653	125.1
17/12/2019 00:00	04:28:30	0.837	97.776	126.1
17/12/2019 00:00	04:28:40	0.838	97.818	127.1
17/12/2019 00:00	04:28:50	0.839	97.975	128.1
17/12/2019 00:00	04:29:00	0.841	98.203	129.1
17/12/2019 00:00	04:29:10	0.841	98.196	130.1

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17/12/2019 00:00	04:29:20	0.843	98.494	131
17/12/2019 00:00	04:29:30	0.848	98.989	132
17/12/2019 00:00	04:29:40	0.845	98.657	133
17/12/2019 00:00	04:29:50	0.844	98.616	134
17/12/2019 00:00	04:30:00	0.844	98.601	135
17/12/2019 00:00	04:30:10	0.843	98.426	136
17/12/2019 00:00	04:30:20	0.843	98.416	136.9
17/12/2019 00:00	04:30:30	0.843	98.435	137.9
17/12/2019 00:00	04:30:40	0.841	98.248	138.9
17/12/2019 00:00	04:30:50	0.847	98.942	139.9
17/12/2019 00:00	04:31:00	0.844	98.618	140.9
17/12/2019 00:00	04:31:10	0.844	98.53	141.9
17/12/2019 00:00	04:31:20	0.848	99.057	142.9
17/12/2019 00:00	04:31:30	0.846	98.813	143.9
17/12/2019 00:00	04:31:40	0.838	97.869	144.9
17/12/2019 00:00	04:31:50	0.834	97.458	145.8
17/12/2019 00:00	04:32:00	0.844	98.621	146.8
17/12/2019 00:00	04:32:10	0.843	98.458	147.8
17/12/2019 00:00	04:32:20	0.841	98.191	148.8
17/12/2019 00:00	04:32:30	0.844	98.589	149.8
17/12/2019 00:00	04:32:40	0.849	99.095	150.8
17/12/2019 00:00	04:32:50	0.845	98.689	151.7
17/12/2019 00:00	04:33:00	0.846	98.8	152.7
17/12/2019 00:00	04:33:10	0.845	98.67	153.7
17/12/2019 00:00	04:33:20	0.848	99.019	154.7
17/12/2019 00:00	04:33:30	0.848	98.989	155.7
17/12/2019 00:00	04:33:40	0.848	99.018	156.7
17/12/2019 00:00	04:33:50	0.844	98.582	157.7
17/12/2019 00:00	04:34:00	0.844	98.555	158.7
17/12/2019 00:00	04:34:10	0.851	99.417	159.7
17/12/2019 00:00	04:34:20	0.842	98.385	160.6
17/12/2019 00:00	04:34:30	0.843	98.507	161.6
17/12/2019 00:00	04:34:40	0.843	98.468	162.6
17/12/2019 00:00	04:34:50	0.848	99.016	163.6
17/12/2019 00:00	04:35:00	0.848	99.018	164.6
17/12/2019 00:00	04:35:10	0.846	98.807	165.5
17/12/2019 00:00	04:35:20	0.842	98.362	166.6
17/12/2019 00:00	04:35:30	0.845	98.656	167.5
17/12/2019 00:00	04:35:40	0.848	99.037	168.6
17/12/2019 00:00	04:35:50	0.843	98.458	169.5

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17/12/2019 00:00	04:36:00	0.845	98.664	170.5
17/12/2019 00:00	04:36:10	0.843	98.504	171.5
17/12/2019 00:00	04:36:20	0.84	98.074	172.5
17/12/2019 00:00	04:36:30	0.832	97.194	173.5
17/12/2019 00:00	04:36:40	0.841	98.24	174.4
17/12/2019 00:00	04:36:50	0.847	98.887	175.4
17/12/2019 00:00	04:37:00	0.838	97.859	176.4
17/12/2019 00:00	04:37:10	0.84	98.13	177.4
17/12/2019 00:00	04:37:20	0.843	98.397	178.4
17/12/2019 00:00	04:37:30	0.844	98.592	179.3
17/12/2019 00:00	04:37:40	0.841	98.225	180.3
17/12/2019 00:00	04:37:50	0.844	98.584	181.3
17/12/2019 00:00	04:38:00	0.849	99.166	182.3
17/12/2019 00:00	04:38:10	0.845	98.701	183.3
17/12/2019 00:00	04:38:20	0.841	98.228	184.3
17/12/2019 00:00	04:38:30	0.842	98.362	185.3
17/12/2019 00:00	04:38:40	0.847	98.935	186.3
17/12/2019 00:00	04:38:50	0.851	99.392	187.3
17/12/2019 00:00	04:39:00	0.846	98.785	188.3
17/12/2019 00:00	04:39:10	0.845	98.668	189.2
17/12/2019 00:00	04:39:20	0.846	98.84	190.2
17/12/2019 00:00	04:39:30	0.845	98.696	191.2
17/12/2019 00:00	04:39:40	0.839	98.033	192.2
17/12/2019 00:00	04:39:50	0.842	98.321	193.2
17/12/2019 00:00	04:40:00	0.846	98.813	194.1
17/12/2019 00:00	04:40:10	0.852	99.529	195.1
17/12/2019 00:00	04:40:20	0.842	98.349	196.1
17/12/2019 00:00	04:40:30	0.838	97.89	197.1
17/12/2019 00:00	04:40:40	0.84	98.046	198.1
17/12/2019 00:00	04:40:50	0.848	99.032	199.1
17/12/2019 00:00	04:41:00	0.843	98.488	200.1
17/12/2019 00:00	04:41:10	0.843	98.411	201.1
17/12/2019 00:00	04:41:20	0.839	97.951	202.1
17/12/2019 00:00	04:41:30	0.842	98.303	203
17/12/2019 00:00	04:41:40	0.843	98.446	204
17/12/2019 00:00	04:41:50	0.845	98.628	205
17/12/2019 00:00	04:42:00	0.845	98.711	206
17/12/2019 00:00	04:42:10	0.846	98.749	207
17/12/2019 00:00	04:42:20	0.847	98.877	207.9
17/12/2019 00:00	04:42:30	0.844	98.555	208.9

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17/12/2019 00:00	04:42:40	0.844	98.599	209.9
17/12/2019 00:00	04:42:50	0.832	97.149	210.9
17/12/2019 00:00	04:43:00	0.846	98.761	211.9
17/12/2019 00:00	04:43:10	0.848	99.028	212.9
17/12/2019 00:00	04:43:20	0.848	99.056	213.9
17/12/2019 00:00	04:43:30	0.846	98.803	214.9
17/12/2019 00:00	04:43:40	0.844	98.58	215.9
17/12/2019 00:00	04:43:50	0.85	99.318	216.8
17/12/2019 00:00	04:44:00	0.848	99.036	217.8
17/12/2019 00:00	04:44:10	0.841	98.269	218.8
17/12/2019 00:00	04:44:20	0.844	98.571	219.8
17/12/2019 00:00	04:44:30	0.846	98.755	220.8
17/12/2019 00:00	04:44:40	0.847	98.879	221.7
17/12/2019 00:00	04:44:50	0.845	98.665	222.7
17/12/2019 00:00	04:45:00	0.846	98.768	223.7
17/12/2019 00:00	04:45:10	0.846	98.827	224.7
17/12/2019 00:00	04:45:20	0.842	98.322	225.7
17/12/2019 00:00	04:45:30	0.844	98.51	226.7
17/12/2019 00:00	04:45:40	0.844	98.565	227.7
17/12/2019 00:00	04:45:50	0.85	99.307	228.7
17/12/2019 00:00	04:46:00	0.846	98.746	229.7
17/12/2019 00:00	04:46:10	0.843	98.467	230.7
17/12/2019 00:00	04:46:20	0.84	98.058	231.6
17/12/2019 00:00	04:46:30	0.848	98.996	232.6
17/12/2019 00:00	04:46:40	0.844	98.547	233.6
17/12/2019 00:00	04:46:50	0.844	98.595	234.6
17/12/2019 00:00	04:47:00	0.854	99.703	235.6
17/12/2019 00:00	04:47:10	0.846	98.805	236.5
17/12/2019 00:00	04:47:20	0.836	97.629	237.6
17/12/2019 00:00	04:47:30	0.848	99.09	238.5
17/12/2019 00:00	04:47:40	0.845	98.722	239.5
17/12/2019 00:00	04:47:50	0.844	98.587	240.5
17/12/2019 00:00	04:48:00	0.845	98.73	241.5
17/12/2019 00:00	04:48:10	0.846	98.858	242.5
17/12/2019 00:00	04:48:20	0.842	98.336	243.5
17/12/2019 00:00	04:48:30	0.848	99.05	244.5
17/12/2019 00:00	04:48:40	0.836	97.631	245.4
17/12/2019 00:00	04:48:50	0.847	98.926	246.4
17/12/2019 00:00	04:49:00	0.848	99.056	247.4
17/12/2019 00:00	04:49:10	0.846	98.835	248.4

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17/12/2019 00:00	04:49:20	0.848	99.05	249.4
17/12/2019 00:00	04:49:30	0.848	99.073	250.4
17/12/2019 00:00	04:49:40	0.844	98.59	251.4
17/12/2019 00:00	04:49:50	0.839	98.035	252.3
17/12/2019 00:00	04:50:00	0.836	97.667	253.3
17/12/2019 00:00	04:50:10	0.843	98.491	254.3
17/12/2019 00:00	04:50:20	0.841	98.265	255.3
17/12/2019 00:00	04:50:30	0.843	98.447	256.3
17/12/2019 00:00	04:50:40	0.847	98.884	257.3
17/12/2019 00:00	04:50:50	0.845	98.703	258.3
17/12/2019 00:00	04:51:00	0.844	98.55	259.3
17/12/2019 00:00	04:51:10	0.845	98.705	260.2
17/12/2019 00:00	04:51:20	0.84	98.117	261.2
17/12/2019 00:00	04:51:30	0.844	98.511	262.2
17/12/2019 00:00	04:51:40	0.848	99.06	263.2
17/12/2019 00:00	04:51:50	0.857	100.034	264.2
17/12/2019 00:00	04:52:00	0.842	98.382	265.1
17/12/2019 00:00	04:52:10	0.843	98.455	266.1
17/12/2019 00:00	04:52:20	0.84	98.129	267.1
17/12/2019 00:00	04:52:30	0.839	97.969	268.1
17/12/2019 00:00	04:52:40	0.85	99.299	269.1
17/12/2019 00:00	04:52:50	0.845	98.645	270.1
17/12/2019 00:00	04:53:00	0.85	99.251	271.1
17/12/2019 00:00	04:53:10	0.845	98.718	272.1
17/12/2019 00:00	04:53:20	0.841	98.265	273.1
17/12/2019 00:00	04:53:30	0.842	98.341	274
17/12/2019 00:00	04:53:40	0.851	99.328	275
17/12/2019 00:00	04:53:50	0.842	98.307	276
17/12/2019 00:00	04:54:00	0.847	98.923	277
17/12/2019 00:00	04:54:10	0.839	97.948	278
17/12/2019 00:00	04:54:20	0.848	99.022	278.9
17/12/2019 00:00	04:54:30	0.843	98.509	279.9
17/12/2019 00:00	04:54:40	0.845	98.643	280.9
17/12/2019 00:00	04:54:50	0.847	98.933	281.9
17/12/2019 00:00	04:55:00	0.84	98.079	282.9
17/12/2019 00:00	04:55:10	0.842	98.328	283.9
17/12/2019 00:00	04:55:20	0.846	98.808	284.9
17/12/2019 00:00	04:55:30	0.844	98.562	285.9
17/12/2019 00:00	04:55:40	0.846	98.815	286.9
17/12/2019 00:00	04:55:50	0.852	99.489	287.8

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17/12/2019 00:00	04:56:00	0.843	98.505	288.8
17/12/2019 00:00	04:56:10	0.841	98.219	289.8
17/12/2019 00:00	04:56:20	0.843	98.503	290.8
17/12/2019 00:00	04:56:30	0.845	98.741	291.8
17/12/2019 00:00	04:56:40	0.84	98.105	292.8
17/12/2019 00:00	04:56:50	0.842	98.3	293.7
17/12/2019 00:00	04:57:00	0.837	97.76	294.7
17/12/2019 00:00	04:57:10	0.845	98.671	295.7
17/12/2019 00:00	04:57:20	0.84	98.103	296.7
17/12/2019 00:00	04:57:30	0.844	98.541	297.7
17/12/2019 00:00	04:57:40	0.84	98.078	298.7
17/12/2019 00:00	04:57:50	0.839	97.946	299.7
17/12/2019 00:00	04:58:00	0.846	98.794	300.7
17/12/2019 00:00	04:58:10	0.848	99.033	301.6
17/12/2019 00:00	04:58:20	0.844	98.579	302.6
17/12/2019 00:00	04:58:30	0.849	99.191	303.6
17/12/2019 00:00	04:58:40	0.849	99.096	304.6
17/12/2019 00:00	04:58:50	0.849	99.134	305.6
17/12/2019 00:00	04:59:00	0.85	99.217	306.6
17/12/2019 00:00	04:59:10	0.842	98.381	307.6
17/12/2019 00:00	04:59:20	0.847	98.861	308.6
17/12/2019 00:00	04:59:30	0.835	97.537	309.5
17/12/2019 00:00	04:59:40	0.846	98.833	310.5
17/12/2019 00:00	04:59:50	0.841	98.273	311.5
17/12/2019 00:00	05:00:00	0.843	98.501	312.5
17/12/2019 00:00	05:00:10	0.851	99.427	313.5
17/12/2019 00:00	05:00:20	0.851	99.373	314.5
17/12/2019 00:00	05:00:30	0.846	98.799	315.5
17/12/2019 00:00	05:00:40	0.846	98.757	316.4
17/12/2019 00:00	05:00:50	0.841	98.166	317.4
17/12/2019 00:00	05:01:00	0.846	98.774	318.4
17/12/2019 00:00	05:01:10	0.846	98.813	319.4
17/12/2019 00:00	05:01:20	0.841	98.266	320.4
17/12/2019 00:00	05:01:30	0.842	98.343	321.4
17/12/2019 00:00	05:01:40	0.852	99.462	322.4
17/12/2019 00:00	05:01:50	0.841	98.253	323.4
17/12/2019 00:00	05:02:00	0.853	99.592	324.4
17/12/2019 00:00	05:02:10	0.852	99.521	325.3
17/12/2019 00:00	05:02:20	0.848	99.053	326.3
17/12/2019 00:00	05:02:30	0.85	99.24	327.3

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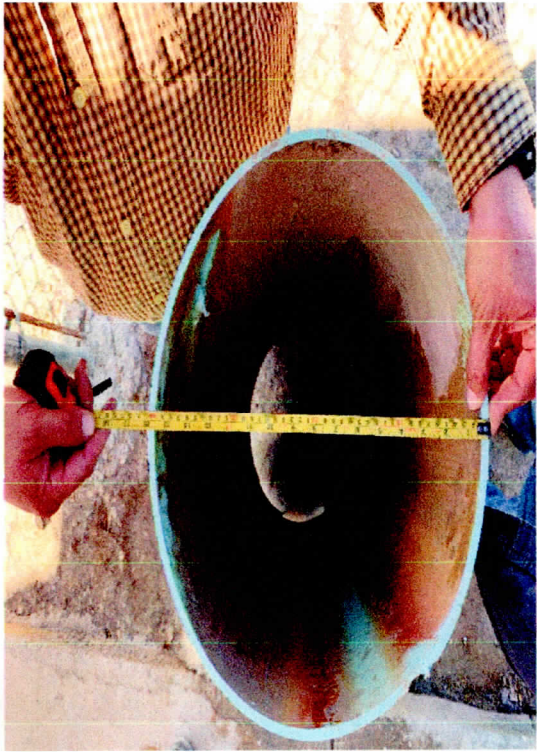
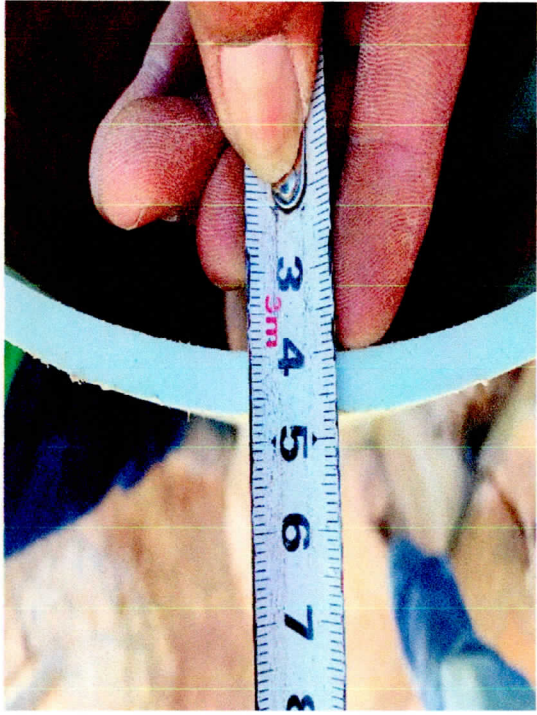
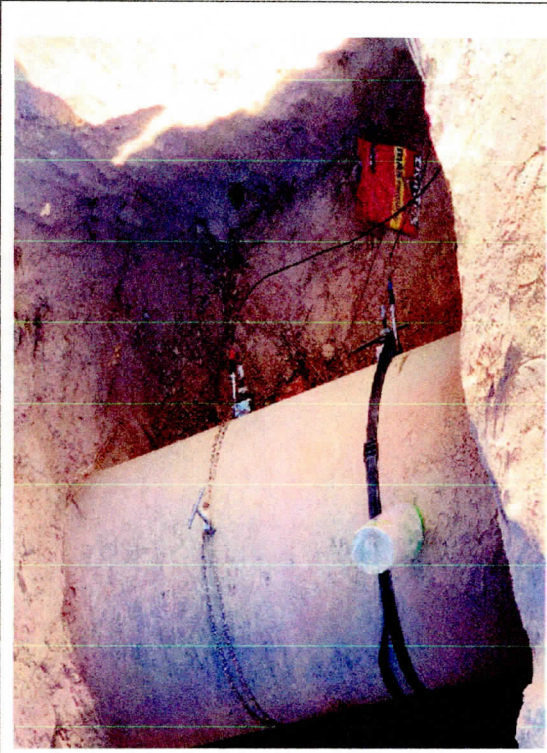
17/12/2019 00:00	05:02:40	0.85	99.298	328.3
17/12/2019 00:00	05:02:50	0.849	99.163	329.3
17/12/2019 00:00	05:03:00	0.85	99.26	330.3
17/12/2019 00:00	05:03:10	0.851	99.338	331.3
17/12/2019 00:00	05:03:20	0.843	98.465	332.3
17/12/2019 00:00	05:03:30	0.841	98.251	333.3
17/12/2019 00:00	05:03:40	0.847	98.903	334.3
17/12/2019 00:00	05:03:50	0.847	98.945	335.2
17/12/2019 00:00	05:04:00	0.853	99.566	336.2
17/12/2019 00:00	05:04:10	0.842	98.379	337.2
17/12/2019 00:00	05:04:20	0.843	98.439	338.2
17/12/2019 00:00	05:04:30	0.851	99.349	339.2
17/12/2019 00:00	05:04:40	0.849	99.209	340.2
17/12/2019 00:00	05:04:50	0.85	99.309	341.2
17/12/2019 00:00	05:05:00	0.847	98.929	342.2
17/12/2019 00:00	05:05:10	0.846	98.827	343.2
17/12/2019 00:00	05:05:20	0.847	98.88	344.1
17/12/2019 00:00	05:05:30	0.848	99.029	345.1
17/12/2019 00:00	05:05:40	0.843	98.443	346.1
17/12/2019 00:00	05:05:50	0.843	98.45	347.1
17/12/2019 00:00	05:06:00	0.847	98.925	348.1
17/12/2019 00:00	05:06:10	0.844	98.572	349.1
17/12/2019 00:00	05:06:20	0.848	99.069	350
17/12/2019 00:00	05:06:30	0.846	98.836	351.1
17/12/2019 00:00	05:06:40	0.843	98.507	352
17/12/2019 00:00	05:06:50	0.843	98.441	353
17/12/2019 00:00	05:07:00	0.849	99.143	354
17/12/2019 00:00	05:07:10	0.842	98.334	355
17/12/2019 00:00	05:07:20	0.846	98.767	356
17/12/2019 00:00	05:07:30	0.845	98.693	357
17/12/2019 00:00	05:07:40	0.851	99.374	358
17/12/2019 00:00	05:07:50	0.838	97.819	358.9
17/12/2019 00:00	05:08:00	0.846	98.852	359.9
17/12/2019 00:00	05:08:10	0.851	99.369	360.9
17/12/2019 00:00	05:08:20	0.837	97.705	361.9
17/12/2019 00:00	05:08:30	0.849	99.183	362.9
17/12/2019 00:00	05:08:40	0.844	98.541	363.9
17/12/2019 00:00	05:08:50	0.841	98.249	364.9
17/12/2019 00:00	05:09:00	0.845	98.676	365.9
17/12/2019 00:00	05:09:10	0.846	98.83	366.9

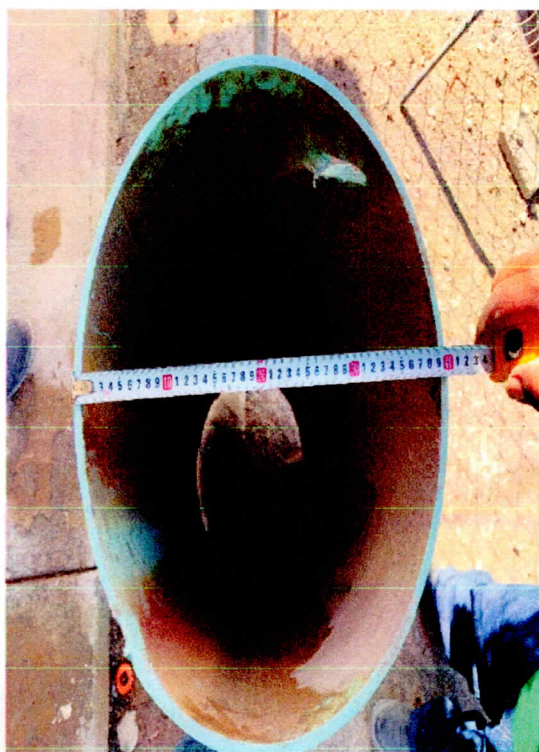
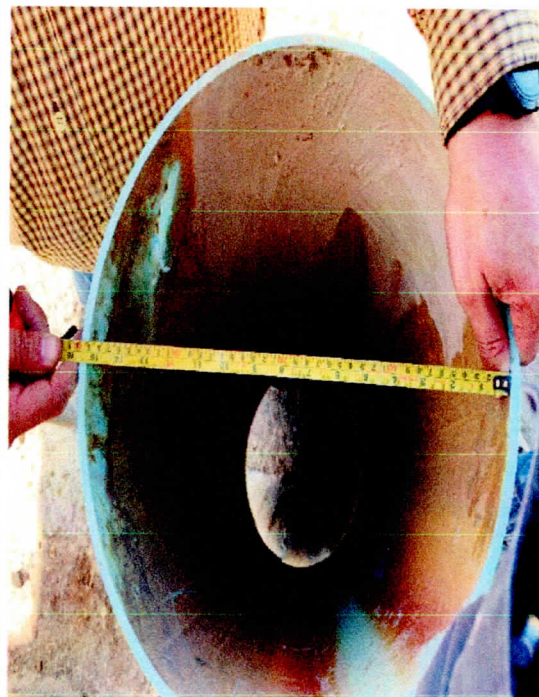
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17/12/2019 00:00	05:09:20	0.847	98.971	367.8
17/12/2019 00:00	05:09:30	0.845	98.719	368.8
17/12/2019 00:00	05:09:40	0.838	97.889	369.8
17/12/2019 00:00	05:09:50	0.849	99.189	370.8
17/12/2019 00:00	05:10:00	0.844	98.552	371.8
17/12/2019 00:00	22:26:38	0.765	89.334	1406.2
17/12/2019 00:00	22:26:48	0.898	104.817	1407.2
17/12/2019 00:00	22:26:58	0.909	106.108	1408.2
17/12/2019 00:00	22:27:08	0.914	106.705	1409.3
17/12/2019 00:00	22:27:18	0.909	106.151	1410.3
17/12/2019 00:00	22:27:28	0.913	106.608	1411.4
17/12/2019 00:00	22:27:38	0.905	105.716	1412.5
17/12/2019 00:00	22:27:48	0.904	105.53	1413.5
17/12/2019 00:00	22:27:58	0.912	106.521	1414.6
17/12/2019 00:00	22:28:08	0.91	106.296	1415.6
17/12/2019 00:00	22:28:18	0.915	106.839	1416.7
17/12/2019 00:00	22:28:28	0.911	106.337	1417.8
17/12/2019 00:00	22:28:38	0.906	105.826	1418.9
17/12/2019 00:00	22:28:48	0.911	106.347	1419.9
17/12/2019 00:00	22:28:58	0.911	106.365	1421
17/12/2019 00:00	22:29:08	0.914	106.688	1422
17/12/2019 00:00	22:29:18	0.915	106.825	1423.1
17/12/2019 00:00	22:29:28	0.91	106.286	1424.2
17/12/2019 00:00	22:29:38	0.915	106.837	1425.3
17/12/2019 00:00	22:29:48	0.916	106.954	1426.3
17/12/2019 00:00	22:29:58	0.915	106.828	1427.4
17/12/2019 00:00	22:30:08	0.911	106.429	1428.5
17/12/2019 00:00	22:30:18	0.908	106.095	1429.5
17/12/2019 00:00	22:30:28	0.91	106.259	1430.6
17/12/2019 00:00	22:30:38	0.909	106.16	1431.6
17/12/2019 00:00	22:30:48	0.912	106.559	1432.7
17/12/2019 00:00	22:30:58	0.909	106.13	1433.8

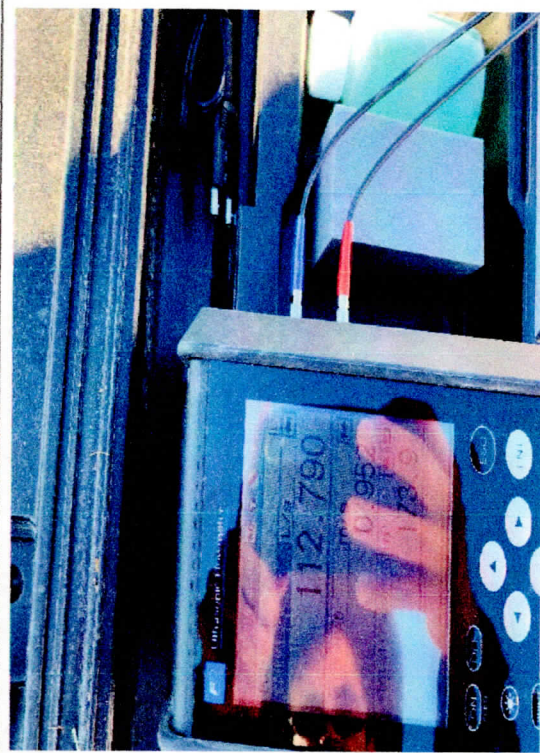












IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA POZO 25

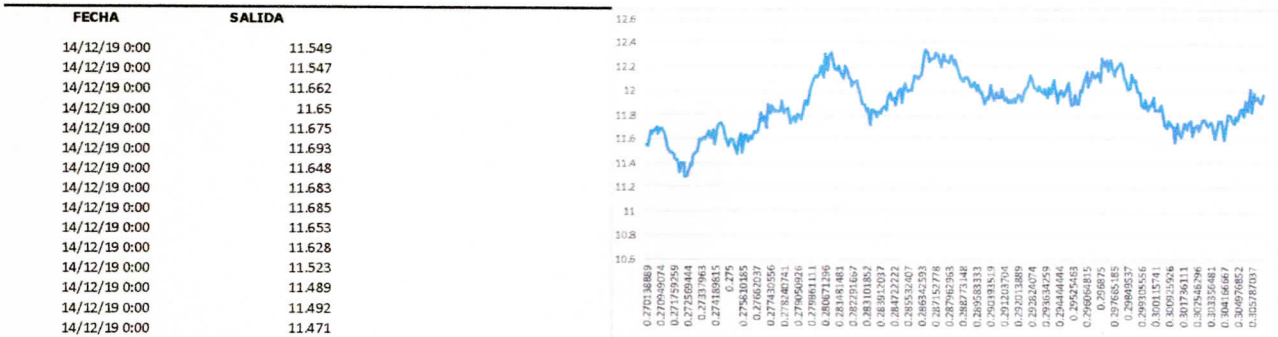


ING. JOSE SANTOS ESCAMILLA LOPEZ

FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES			
Proyecto: Pozo 25			
No. Sitio:	Pozo 25	Fuente de Abastecimiento:	
Sector:		Fecha de Inicio de Registro:	14 de Dic 2019
Calle:		Fecha de fin de registro:	14 de Dic 2019
Colonia:		Hora:	18:29
GPS:	Latitud 23°54'37.88"N 60 min Estiaje:	Longitud 100°47'29.10"W	Altitud: 1745 MSNM

Tiempo de Op.		Tiempo sin Operación:	
MEDIDOR			
Tipo:	Caudalímetro por ultrasonico	Modelo	Portaflow X
		No. Serie	S10A2-00Y
Caudal Puntual:	11.9 LPS	No. De Medidor Ultrasonico	S/M
		Modelo	

GRÁFICA DE CAUDAL



Fotografía del macro medidor	Fotografía del medidor ultrasonico
Referencias del sitio de Medición:	
Observaciones:	

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 25



ING. JOSE SANTOS ESCAMILLA LOPEZ

4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
14/12/2019 00:00	06:29:00	1.436	11.549	0
14/12/2019 00:00	06:29:10	1.436	11.547	0.1
14/12/2019 00:00	06:29:20	1.45	11.662	0.3
14/12/2019 00:00	06:29:30	1.448	11.65	0.4
14/12/2019 00:00	06:29:40	1.452	11.675	0.5
14/12/2019 00:00	06:29:50	1.454	11.693	0.6
14/12/2019 00:00	06:30:00	1.448	11.648	0.7
14/12/2019 00:00	06:30:10	1.453	11.683	0.8
14/12/2019 00:00	06:30:20	1.453	11.685	1
14/12/2019 00:00	06:30:30	1.449	11.653	1.1
14/12/2019 00:00	06:30:40	1.446	11.628	1.2
14/12/2019 00:00	06:30:50	1.433	11.523	1.3
14/12/2019 00:00	06:31:00	1.428	11.489	1.4
14/12/2019 00:00	06:31:10	1.429	11.492	1.5
14/12/2019 00:00	06:31:20	1.426	11.471	1.6
14/12/2019 00:00	06:31:30	1.422	11.437	1.8
14/12/2019 00:00	06:31:40	1.421	11.431	1.9
14/12/2019 00:00	06:31:50	1.408	11.328	2
14/12/2019 00:00	06:32:00	1.417	11.399	2.1
14/12/2019 00:00	06:32:10	1.417	11.395	2.2
14/12/2019 00:00	06:32:20	1.404	11.29	2.3
14/12/2019 00:00	06:32:30	1.404	11.293	2.4
14/12/2019 00:00	06:32:40	1.416	11.386	2.6
14/12/2019 00:00	06:32:50	1.415	11.383	2.7
14/12/2019 00:00	06:33:00	1.426	11.467	2.8
14/12/2019 00:00	06:33:10	1.427	11.479	2.9
14/12/2019 00:00	06:33:20	1.43	11.499	3
14/12/2019 00:00	06:33:30	1.443	11.604	3.1
14/12/2019 00:00	06:33:40	1.441	11.59	3.2
14/12/2019 00:00	06:33:50	1.444	11.611	3.4
14/12/2019 00:00	06:34:00	1.442	11.6	3.5
14/12/2019 00:00	06:34:10	1.447	11.641	3.6
14/12/2019 00:00	06:34:20	1.451	11.666	3.7
14/12/2019 00:00	06:34:30	1.445	11.619	3.8
14/12/2019 00:00	06:34:40	1.451	11.672	3.9
14/12/2019 00:00	06:34:50	1.437	11.561	4.1
14/12/2019 00:00	06:35:00	1.453	11.683	4.2
14/12/2019 00:00	06:35:10	1.458	11.729	4.3
14/12/2019 00:00	06:35:20	1.459	11.734	4.4

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ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	06:35:30	1.454	11.692	4.5
14/12/2019 00:00	06:35:40	1.446	11.629	4.6
14/12/2019 00:00	06:35:50	1.44	11.579	4.8
14/12/2019 00:00	06:36:00	1.436	11.548	4.9
14/12/2019 00:00	06:36:10	1.443	11.607	5
14/12/2019 00:00	06:36:20	1.442	11.594	5.1
14/12/2019 00:00	06:36:30	1.435	11.541	5.2
14/12/2019 00:00	06:36:40	1.428	11.483	5.3
14/12/2019 00:00	06:36:50	1.439	11.571	5.5
14/12/2019 00:00	06:37:00	1.448	11.648	5.6
14/12/2019 00:00	06:37:10	1.428	11.487	5.7
14/12/2019 00:00	06:37:20	1.447	11.638	5.8
14/12/2019 00:00	06:37:30	1.447	11.635	5.9
14/12/2019 00:00	06:37:40	1.441	11.588	6
14/12/2019 00:00	06:37:50	1.446	11.627	6.2
14/12/2019 00:00	06:38:00	1.442	11.601	6.3
14/12/2019 00:00	06:38:10	1.45	11.662	6.4
14/12/2019 00:00	06:38:20	1.449	11.652	6.5
14/12/2019 00:00	06:38:30	1.452	11.677	6.6
14/12/2019 00:00	06:38:40	1.47	11.825	6.7
14/12/2019 00:00	06:38:50	1.462	11.755	6.9
14/12/2019 00:00	06:39:00	1.466	11.793	7
14/12/2019 00:00	06:39:10	1.454	11.692	7.1
14/12/2019 00:00	06:39:20	1.479	11.895	7.2
14/12/2019 00:00	06:39:30	1.47	11.824	7.3
14/12/2019 00:00	06:39:40	1.477	11.877	7.4
14/12/2019 00:00	06:39:50	1.47	11.826	7.6
14/12/2019 00:00	06:40:00	1.472	11.842	7.7
14/12/2019 00:00	06:40:10	1.471	11.834	7.8
14/12/2019 00:00	06:40:20	1.473	11.845	7.9
14/12/2019 00:00	06:40:30	1.483	11.926	8
14/12/2019 00:00	06:40:40	1.47	11.823	8.2
14/12/2019 00:00	06:40:50	1.473	11.849	8.3
14/12/2019 00:00	06:41:00	1.475	11.862	8.4
14/12/2019 00:00	06:41:10	1.459	11.734	8.5
14/12/2019 00:00	06:41:20	1.463	11.769	8.6
14/12/2019 00:00	06:41:30	1.465	11.786	8.7
14/12/2019 00:00	06:41:40	1.461	11.751	8.9
14/12/2019 00:00	06:41:50	1.468	11.81	9
14/12/2019 00:00	06:42:00	1.465	11.787	9.1
14/12/2019 00:00	06:42:10	1.463	11.77	9.2

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
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ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	06:42:20	1.475	11.865	9.3
14/12/2019 00:00	06:42:30	1.483	11.926	9.4
14/12/2019 00:00	06:42:40	1.479	11.893	9.6
14/12/2019 00:00	06:42:50	1.494	12.013	9.7
14/12/2019 00:00	06:43:00	1.497	12.043	9.8
14/12/2019 00:00	06:43:10	1.506	12.11	9.9
14/12/2019 00:00	06:43:20	1.508	12.129	10.1
14/12/2019 00:00	06:43:30	1.506	12.116	10.2
14/12/2019 00:00	06:43:40	1.509	12.139	10.3
14/12/2019 00:00	06:43:50	1.519	12.214	10.4
14/12/2019 00:00	06:44:00	1.506	12.115	10.5
14/12/2019 00:00	06:44:10	1.53	12.309	10.7
14/12/2019 00:00	06:44:20	1.515	12.183	10.8
14/12/2019 00:00	06:44:30	1.529	12.294	10.9
14/12/2019 00:00	06:44:40	1.532	12.324	11
14/12/2019 00:00	06:44:50	1.521	12.235	11.1
14/12/2019 00:00	06:45:00	1.516	12.19	11.3
14/12/2019 00:00	06:45:10	1.515	12.183	11.4
14/12/2019 00:00	06:45:20	1.517	12.205	11.5
14/12/2019 00:00	06:45:30	1.511	12.149	11.6
14/12/2019 00:00	06:45:40	1.506	12.11	11.8
14/12/2019 00:00	06:45:50	1.518	12.209	11.9
14/12/2019 00:00	06:46:00	1.513	12.167	12
14/12/2019 00:00	06:46:10	1.507	12.121	12.1
14/12/2019 00:00	06:46:20	1.502	12.084	12.2
14/12/2019 00:00	06:46:30	1.498	12.046	12.4
14/12/2019 00:00	06:46:40	1.502	12.078	12.5
14/12/2019 00:00	06:46:50	1.503	12.087	12.6
14/12/2019 00:00	06:47:00	1.496	12.032	12.7
14/12/2019 00:00	06:47:10	1.487	11.958	12.8
14/12/2019 00:00	06:47:20	1.48	11.906	13
14/12/2019 00:00	06:47:30	1.478	11.889	13.1
14/12/2019 00:00	06:47:40	1.471	11.829	13.2
14/12/2019 00:00	06:47:50	1.474	11.858	13.3
14/12/2019 00:00	06:48:00	1.458	11.729	13.4
14/12/2019 00:00	06:48:10	1.473	11.848	13.6
14/12/2019 00:00	06:48:20	1.473	11.844	13.7
14/12/2019 00:00	06:48:30	1.466	11.79	13.8
14/12/2019 00:00	06:48:40	1.471	11.833	13.9
14/12/2019 00:00	06:48:50	1.469	11.816	14
14/12/2019 00:00	06:49:00	1.475	11.864	14.2

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
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ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	06:49:10	1.477	11.879	14.3
14/12/2019 00:00	06:49:20	1.474	11.854	14.4
14/12/2019 00:00	06:49:30	1.486	11.952	14.5
14/12/2019 00:00	06:49:40	1.492	11.996	14.6
14/12/2019 00:00	06:49:50	1.483	11.93	14.8
14/12/2019 00:00	06:50:00	1.485	11.943	14.9
14/12/2019 00:00	06:50:10	1.479	11.897	15
14/12/2019 00:00	06:50:20	1.493	12.007	15.1
14/12/2019 00:00	06:50:30	1.495	12.026	15.2
14/12/2019 00:00	06:50:40	1.481	11.911	15.3
14/12/2019 00:00	06:50:50	1.496	12.033	15.5
14/12/2019 00:00	06:51:00	1.5	12.066	15.6
14/12/2019 00:00	06:51:10	1.492	12.003	15.7
14/12/2019 00:00	06:51:20	1.494	12.014	15.8
14/12/2019 00:00	06:51:30	1.494	12.016	15.9
14/12/2019 00:00	06:51:40	1.508	12.127	16.1
14/12/2019 00:00	06:51:50	1.507	12.124	16.2
14/12/2019 00:00	06:52:00	1.505	12.104	16.3
14/12/2019 00:00	06:52:10	1.509	12.137	16.4
14/12/2019 00:00	06:52:20	1.51	12.149	16.6
14/12/2019 00:00	06:52:30	1.53	12.305	16.7
14/12/2019 00:00	06:52:40	1.536	12.35	16.8
14/12/2019 00:00	06:52:50	1.532	12.321	16.9
14/12/2019 00:00	06:53:00	1.523	12.247	17
14/12/2019 00:00	06:53:10	1.526	12.276	17.2
14/12/2019 00:00	06:53:20	1.528	12.287	17.3
14/12/2019 00:00	06:53:30	1.532	12.319	17.4
14/12/2019 00:00	06:53:40	1.53	12.307	17.5
14/12/2019 00:00	06:53:50	1.527	12.28	17.7
14/12/2019 00:00	06:54:00	1.518	12.21	17.8
14/12/2019 00:00	06:54:10	1.531	12.31	17.9
14/12/2019 00:00	06:54:20	1.524	12.259	18
14/12/2019 00:00	06:54:30	1.523	12.251	18.2
14/12/2019 00:00	06:54:40	1.521	12.236	18.3
14/12/2019 00:00	06:54:50	1.53	12.304	18.4
14/12/2019 00:00	06:55:00	1.521	12.23	18.5
14/12/2019 00:00	06:55:10	1.524	12.26	18.6
14/12/2019 00:00	06:55:20	1.516	12.195	18.8
14/12/2019 00:00	06:55:30	1.513	12.17	18.9
14/12/2019 00:00	06:55:40	1.505	12.108	19
14/12/2019 00:00	06:55:50	1.503	12.09	19.1

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
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ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	07:02:50	1.495	12.026	24.2
14/12/2019 00:00	07:03:00	1.487	11.957	24.3
14/12/2019 00:00	07:03:10	1.496	12.033	24.4
14/12/2019 00:00	07:03:20	1.492	11.999	24.5
14/12/2019 00:00	07:03:30	1.504	12.097	24.6
14/12/2019 00:00	07:03:40	1.497	12.04	24.8
14/12/2019 00:00	07:03:50	1.481	11.912	24.9
14/12/2019 00:00	07:04:00	1.49	11.981	25
14/12/2019 00:00	07:04:10	1.494	12.015	25.1
14/12/2019 00:00	07:04:20	1.488	11.968	25.2
14/12/2019 00:00	07:04:30	1.49	11.983	25.4
14/12/2019 00:00	07:04:40	1.498	12.048	25.5
14/12/2019 00:00	07:04:50	1.501	12.075	25.6
14/12/2019 00:00	07:05:00	1.479	11.895	25.7
14/12/2019 00:00	07:05:10	1.481	11.907	25.8
14/12/2019 00:00	07:05:20	1.489	11.978	26
14/12/2019 00:00	07:05:30	1.48	11.905	26.1
14/12/2019 00:00	07:05:40	1.48	11.904	26.2
14/12/2019 00:00	07:05:50	1.494	12.015	26.3
14/12/2019 00:00	07:06:00	1.493	12.009	26.4
14/12/2019 00:00	07:06:10	1.504	12.096	26.6
14/12/2019 00:00	07:06:20	1.513	12.166	26.7
14/12/2019 00:00	07:06:30	1.498	12.047	26.8
14/12/2019 00:00	07:06:40	1.505	12.108	26.9
14/12/2019 00:00	07:06:50	1.513	12.169	27
14/12/2019 00:00	07:07:00	1.506	12.113	27.2
14/12/2019 00:00	07:07:10	1.51	12.143	27.3
14/12/2019 00:00	07:07:20	1.512	12.162	27.4
14/12/2019 00:00	07:07:30	1.503	12.086	27.5
14/12/2019 00:00	07:07:40	1.527	12.282	27.7
14/12/2019 00:00	07:07:50	1.52	12.221	27.8
14/12/2019 00:00	07:08:00	1.524	12.257	27.9
14/12/2019 00:00	07:08:10	1.515	12.181	28
14/12/2019 00:00	07:08:20	1.525	12.261	28.1
14/12/2019 00:00	07:08:30	1.517	12.202	28.3
14/12/2019 00:00	07:08:40	1.509	12.134	28.4
14/12/2019 00:00	07:08:50	1.515	12.184	28.5
14/12/2019 00:00	07:09:00	1.518	12.209	28.6
14/12/2019 00:00	07:09:10	1.522	12.241	28.8
14/12/2019 00:00	07:09:20	1.52	12.227	28.9
14/12/2019 00:00	07:09:30	1.505	12.105	29

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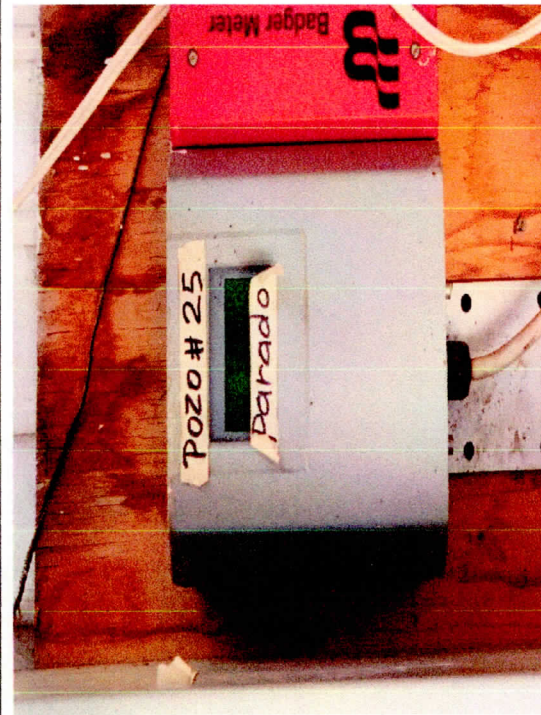
14/12/2019 00:00	07:09:40	1.504	12.099	29.1
14/12/2019 00:00	07:09:50	1.496	12.029	29.2
14/12/2019 00:00	07:10:00	1.496	12.035	29.4
14/12/2019 00:00	07:10:10	1.51	12.147	29.5
14/12/2019 00:00	07:10:20	1.503	12.085	29.6
14/12/2019 00:00	07:10:30	1.504	12.094	29.7
14/12/2019 00:00	07:10:40	1.492	12.004	29.8
14/12/2019 00:00	07:10:50	1.492	11.998	30
14/12/2019 00:00	07:11:00	1.478	11.887	30.1
14/12/2019 00:00	07:11:10	1.476	11.871	30.2
14/12/2019 00:00	07:11:20	1.483	11.929	30.3
14/12/2019 00:00	07:11:30	1.473	11.849	30.4
14/12/2019 00:00	07:11:40	1.478	11.887	30.6
14/12/2019 00:00	07:11:50	1.479	11.897	30.7
14/12/2019 00:00	07:12:00	1.486	11.952	30.8
14/12/2019 00:00	07:12:10	1.474	11.853	30.9
14/12/2019 00:00	07:12:20	1.473	11.849	31
14/12/2019 00:00	07:12:30	1.472	11.841	31.2
14/12/2019 00:00	07:12:40	1.478	11.89	31.3
14/12/2019 00:00	07:12:50	1.462	11.758	31.4
14/12/2019 00:00	07:13:00	1.457	11.718	31.5
14/12/2019 00:00	07:13:10	1.454	11.693	31.6
14/12/2019 00:00	07:13:20	1.462	11.762	31.7
14/12/2019 00:00	07:13:30	1.458	11.726	31.9
14/12/2019 00:00	07:13:40	1.456	11.709	32
14/12/2019 00:00	07:13:50	1.441	11.589	32.1
14/12/2019 00:00	07:14:00	1.459	11.738	32.2
14/12/2019 00:00	07:14:10	1.45	11.666	32.3
14/12/2019 00:00	07:14:20	1.446	11.63	32.4
14/12/2019 00:00	07:14:30	1.457	11.716	32.6
14/12/2019 00:00	07:14:40	1.46	11.74	32.7
14/12/2019 00:00	07:14:50	1.452	11.682	32.8
14/12/2019 00:00	07:15:00	1.459	11.738	32.9
14/12/2019 00:00	07:15:10	1.461	11.754	33
14/12/2019 00:00	07:15:20	1.446	11.631	33.1
14/12/2019 00:00	07:15:30	1.456	11.709	33.3
14/12/2019 00:00	07:15:40	1.458	11.726	33.4
14/12/2019 00:00	07:15:50	1.452	11.678	33.5
14/12/2019 00:00	07:16:00	1.459	11.735	33.6
14/12/2019 00:00	07:16:10	1.464	11.774	33.7
14/12/2019 00:00	07:16:20	1.463	11.77	33.9

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 25



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	07:16:30	1.458	11.726	34
14/12/2019 00:00	07:16:40	1.457	11.715	34.1
14/12/2019 00:00	07:16:50	1.46	11.744	34.2
14/12/2019 00:00	07:17:00	1.458	11.726	34.3
14/12/2019 00:00	07:17:10	1.444	11.613	34.4
14/12/2019 00:00	07:17:20	1.455	11.702	34.6
14/12/2019 00:00	07:17:30	1.462	11.76	34.7
14/12/2019 00:00	07:17:40	1.46	11.745	34.8
14/12/2019 00:00	07:17:50	1.462	11.757	34.9
14/12/2019 00:00	07:18:00	1.443	11.604	35
14/12/2019 00:00	07:18:10	1.46	11.743	35.1
14/12/2019 00:00	07:18:20	1.468	11.807	35.3
14/12/2019 00:00	07:18:30	1.467	11.796	35.4
14/12/2019 00:00	07:18:40	1.464	11.772	35.5
14/12/2019 00:00	07:18:50	1.46	11.742	35.6
14/12/2019 00:00	07:19:00	1.466	11.791	35.7
14/12/2019 00:00	07:19:10	1.463	11.768	35.8
14/12/2019 00:00	07:19:20	1.474	11.856	36
14/12/2019 00:00	07:19:30	1.475	11.865	36.1
14/12/2019 00:00	07:19:40	1.467	11.803	36.2
14/12/2019 00:00	07:19:50	1.482	11.922	36.3
14/12/2019 00:00	07:20:00	1.472	11.839	36.4
14/12/2019 00:00	07:20:10	1.495	12.024	36.6
14/12/2019 00:00	07:20:20	1.472	11.835	36.7
14/12/2019 00:00	07:20:30	1.49	11.987	36.8
14/12/2019 00:00	07:20:40	1.484	11.933	36.9
14/12/2019 00:00	07:20:50	1.487	11.958	37
14/12/2019 00:00	07:21:00	1.481	11.914	37.2
14/12/2019 00:00	07:21:10	1.481	11.91	37.3
14/12/2019 00:00	07:21:20	1.488	11.971	37.4





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MATEHUALA POZO FABIOLA



ING. JOSE SANTOS ESCAMILLA LOPEZ

FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES				
Proyecto:				
No. Sitio:	Pozo Fabiola		Fuente de Abastecimiento:	
Sector:		Fecha de inicio de Registro:	12 de Dic 2019	
Calle:		Fecha de fin de registro:	12 de Dic 2019	
Colonia:		Hora:	1:26	
GPS:	Latitud	23°53'6.07"N	Longitud	23°53'6.07"N
	60 min	Estiaje:	Altitud:	1725 MSNM

Tiempo de Op.

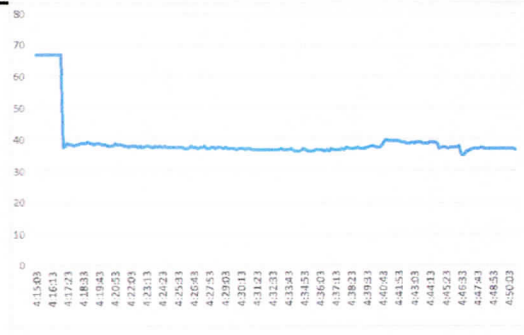
Tiempo sin Operación:

MEDIDOR				
Tipo:	Caudalimetro por ultrasonico	Modelo	Portaflow X	No. Serie
Caudal Puntual:	39.34 LPS	No. De Medidor Ultrasonico	S/M	Modelo
				510A2-00Y

GRÁFICA DE CAUDAL

FECHA SALIDA

13/12/19 0:00	66.718
13/12/19 0:00	66.831
13/12/19 0:00	66.847
13/12/19 0:00	66.85
13/12/19 0:00	66.85
13/12/19 0:00	66.85
13/12/19 0:00	66.85
13/12/19 0:00	66.85
13/12/19 0:00	66.85
13/12/19 0:00	66.85
13/12/19 0:00	66.85
13/12/19 0:00	66.85
13/12/19 0:00	66.85
13/12/19 0:00	66.85
13/12/19 0:00	66.85
13/12/19 0:00	37.494
13/12/19 0:00	37.917
13/12/19 0:00	38.428



Fotografía del macro medidor



Fotografía del medidor ultrasonico



Referencias del sitio de Medición:

Observaciones:

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO FABIOLA



ING. JOSE SANTOS ESCAMILLA LOPEZ

4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
13/12/2019 00:00	04:15:03	2.057	66.718	3
13/12/2019 00:00	04:15:13	2.06	66.831	3
13/12/2019 00:00	04:15:23	2.061	66.847	3
13/12/2019 00:00	04:15:33	2.061	66.85	3
13/12/2019 00:00	04:15:43	2.061	66.85	3
13/12/2019 00:00	04:15:53	2.061	66.85	3
13/12/2019 00:00	04:16:03	2.061	66.85	3
13/12/2019 00:00	04:16:13	2.061	66.85	3
13/12/2019 00:00	04:16:23	2.061	66.85	3
13/12/2019 00:00	04:16:33	2.061	66.85	3
13/12/2019 00:00	04:16:43	2.061	66.85	3
13/12/2019 00:00	04:16:53	2.061	66.85	3
13/12/2019 00:00	04:17:03	2.061	37.494	3
13/12/2019 00:00	04:17:13	2.084	37.917	3.2
13/12/2019 00:00	04:17:23	2.112	38.428	3.5
13/12/2019 00:00	04:17:33	2.107	38.325	3.9
13/12/2019 00:00	04:17:43	2.094	38.101	4.3
13/12/2019 00:00	04:17:53	2.087	37.967	4.7
13/12/2019 00:00	04:18:03	2.097	38.154	5.1
13/12/2019 00:00	04:18:13	2.102	38.238	5.4
13/12/2019 00:00	04:18:23	2.117	38.518	5.8
13/12/2019 00:00	04:18:33	2.131	38.762	6.2
13/12/2019 00:00	04:18:43	2.112	38.422	6.6
13/12/2019 00:00	04:18:53	2.135	38.834	7
13/12/2019 00:00	04:19:03	2.121	38.596	7.4
13/12/2019 00:00	04:19:13	2.113	38.444	7.8
13/12/2019 00:00	04:19:23	2.103	38.253	8.1
13/12/2019 00:00	04:19:33	2.128	38.722	8.5
13/12/2019 00:00	04:19:43	2.111	38.41	8.9
13/12/2019 00:00	04:19:53	2.101	38.228	9.3
13/12/2019 00:00	04:20:03	2.096	38.124	9.7
13/12/2019 00:00	04:20:13	2.099	38.194	10.1
13/12/2019 00:00	04:20:23	2.088	37.978	10.4
13/12/2019 00:00	04:20:33	2.086	37.949	10.8
13/12/2019 00:00	04:20:43	2.086	37.949	11.2
13/12/2019 00:00	04:20:53	2.112	38.425	11.6
13/12/2019 00:00	04:21:03	2.091	38.047	12
13/12/2019 00:00	04:21:13	2.105	38.298	12.3

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ING. JOSE SANTOS ESCAMILLA LOPEZ

13/12/2019 00:00	04:21:23	2.09	38.017	12.7
13/12/2019 00:00	04:21:33	2.083	37.899	13.1
13/12/2019 00:00	04:21:43	2.075	37.743	13.5
13/12/2019 00:00	04:21:53	2.064	37.555	13.9
13/12/2019 00:00	04:22:03	2.08	37.846	14.2
13/12/2019 00:00	04:22:13	2.081	37.852	14.6
13/12/2019 00:00	04:22:23	2.072	37.702	15
13/12/2019 00:00	04:22:33	2.059	37.465	15.4
13/12/2019 00:00	04:22:43	2.067	37.599	15.7
13/12/2019 00:00	04:22:53	2.058	37.436	16.1
13/12/2019 00:00	04:23:03	2.06	37.472	16.5
13/12/2019 00:00	04:23:13	2.071	37.682	16.9
13/12/2019 00:00	04:23:23	2.07	37.664	0
13/12/2019 00:00	04:23:33	2.054	37.361	0.4
13/12/2019 00:00	04:23:43	2.055	37.391	0.7
13/12/2019 00:00	04:23:53	2.069	37.65	1.1
13/12/2019 00:00	04:24:03	2.061	37.498	1.5
13/12/2019 00:00	04:24:13	2.075	37.754	1.9
13/12/2019 00:00	04:24:23	2.062	37.515	2.2
13/12/2019 00:00	04:24:33	2.071	37.676	2.6
13/12/2019 00:00	04:24:43	2.062	37.521	3
13/12/2019 00:00	04:24:53	2.049	37.281	3.4
13/12/2019 00:00	04:25:03	2.051	37.309	3.7
13/12/2019 00:00	04:25:13	2.064	37.559	4.1
13/12/2019 00:00	04:25:23	2.061	37.504	4.5
13/12/2019 00:00	04:25:33	2.05	37.3	4.9
13/12/2019 00:00	04:25:43	2.048	37.251	5.2
13/12/2019 00:00	04:25:53	2.059	37.456	5.6
13/12/2019 00:00	04:26:03	2.035	37.02	6
13/12/2019 00:00	04:26:13	2.044	37.181	6.3
13/12/2019 00:00	04:26:23	2.052	37.341	6.7
13/12/2019 00:00	04:26:33	2.067	37.6	7.1
13/12/2019 00:00	04:26:43	2.057	37.429	7.5
13/12/2019 00:00	04:26:53	2.059	37.465	7.8
13/12/2019 00:00	04:27:03	2.041	37.139	8.2
13/12/2019 00:00	04:27:13	2.059	37.459	8.6
13/12/2019 00:00	04:27:23	2.057	37.429	9
13/12/2019 00:00	04:27:33	2.07	37.657	9.3
13/12/2019 00:00	04:27:43	2.035	37.025	9.7
13/12/2019 00:00	04:27:53	2.034	37.01	10.1
13/12/2019 00:00	04:28:03	2.066	37.584	10.5

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ING. JOSE SANTOS ESCAMILLA LOPEZ

13/12/2019 00:00	04:28:13	2.046	37.228	10.8
13/12/2019 00:00	04:28:23	2.042	37.142	11.2
13/12/2019 00:00	04:28:33	2.047	37.247	11.6
13/12/2019 00:00	04:28:43	2.045	37.203	11.9
13/12/2019 00:00	04:28:53	2.044	37.183	12.3
13/12/2019 00:00	04:29:03	2.048	37.254	12.7
13/12/2019 00:00	04:29:13	2.034	37.006	13.1
13/12/2019 00:00	04:29:23	2.035	37.027	13.4
13/12/2019 00:00	04:29:33	2.043	37.173	13.8
13/12/2019 00:00	04:29:43	2.041	37.135	14.2
13/12/2019 00:00	04:29:53	2.02	36.744	14.5
13/12/2019 00:00	04:30:03	2.024	36.814	14.9
13/12/2019 00:00	04:30:13	2.036	37.032	15.3
13/12/2019 00:00	04:30:23	2.024	36.82	15.6
13/12/2019 00:00	04:30:33	2.014	36.647	16
13/12/2019 00:00	04:30:43	2.026	36.868	16.4
13/12/2019 00:00	04:30:53	2.03	36.923	16.7
13/12/2019 00:00	04:31:03	2.01	36.571	17.1
13/12/2019 00:00	04:31:13	2.021	36.769	17.5
13/12/2019 00:00	04:31:23	2.008	36.539	17.9
13/12/2019 00:00	04:31:33	2.005	36.481	18.2
13/12/2019 00:00	04:31:43	2.015	36.662	18.6
13/12/2019 00:00	04:31:53	2.01	36.57	18.9
13/12/2019 00:00	04:32:03	2.02	36.753	19.3
13/12/2019 00:00	04:32:13	2.019	36.732	19.7
13/12/2019 00:00	04:32:23	2.011	36.588	20.1
13/12/2019 00:00	04:32:33	2.021	36.77	20.4
13/12/2019 00:00	04:32:43	2.004	36.463	20.8
13/12/2019 00:00	04:32:53	2.006	36.491	21.1
13/12/2019 00:00	04:33:03	2.009	36.556	21.5
13/12/2019 00:00	04:33:13	2.025	36.832	21.9
13/12/2019 00:00	04:33:23	2.019	36.732	22.2
13/12/2019 00:00	04:33:33	2.011	36.582	22.6
13/12/2019 00:00	04:33:43	2.005	36.478	23
13/12/2019 00:00	04:33:53	2.024	36.825	23.3
13/12/2019 00:00	04:34:03	2.021	36.762	23.7
13/12/2019 00:00	04:34:13	1.997	36.323	24.1
13/12/2019 00:00	04:34:23	1.998	36.352	24.4
13/12/2019 00:00	04:34:33	1.99	36.209	24.8
13/12/2019 00:00	04:34:43	2.003	36.448	25.2
13/12/2019 00:00	04:34:53	2.026	36.854	25.5

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13/12/2019 00:00	04:35:03	2.013	36.623	25.9
13/12/2019 00:00	04:35:13	1.995	36.289	26.3
13/12/2019 00:00	04:35:23	1.989	36.179	26.6
13/12/2019 00:00	04:35:33	1.992	36.243	27
13/12/2019 00:00	04:35:43	2.023	36.799	27.4
13/12/2019 00:00	04:35:53	2.015	36.651	27.7
13/12/2019 00:00	04:36:03	2.003	36.441	28.1
13/12/2019 00:00	04:36:13	2.004	36.455	28.5
13/12/2019 00:00	04:36:23	1.99	36.212	28.8
13/12/2019 00:00	04:36:33	2.019	36.724	29.2
13/12/2019 00:00	04:36:43	1.996	36.315	29.5
13/12/2019 00:00	04:36:53	2.03	36.936	29.9
13/12/2019 00:00	04:37:03	2.013	36.631	30.3
13/12/2019 00:00	04:37:13	2.016	36.675	30.6
13/12/2019 00:00	04:37:23	2.016	36.673	31
13/12/2019 00:00	04:37:33	2.011	36.584	31.4
13/12/2019 00:00	04:37:43	2.026	36.866	31.8
13/12/2019 00:00	04:37:53	2.022	36.783	32.1
13/12/2019 00:00	04:38:03	2.062	37.513	32.5
13/12/2019 00:00	04:38:13	2.034	37.004	32.9
13/12/2019 00:00	04:38:23	2.038	37.07	33.2
13/12/2019 00:00	04:38:33	2.04	37.117	33.6
13/12/2019 00:00	04:38:43	2.043	37.173	34
13/12/2019 00:00	04:38:53	2.048	37.25	34.3
13/12/2019 00:00	04:39:03	2.042	37.149	34.7
13/12/2019 00:00	04:39:13	2.038	37.073	35.1
13/12/2019 00:00	04:39:23	2.03	36.932	35.5
13/12/2019 00:00	04:39:33	2.059	37.457	35.8
13/12/2019 00:00	04:39:43	2.046	37.219	36.2
13/12/2019 00:00	04:39:53	2.068	37.63	36.6
13/12/2019 00:00	04:40:03	2.07	37.652	37
13/12/2019 00:00	04:40:13	2.061	37.489	37.3
13/12/2019 00:00	04:40:23	2.053	37.348	37.7
13/12/2019 00:00	04:40:33	2.065	37.562	38.1
13/12/2019 00:00	04:40:43	2.091	38.048	38.5
13/12/2019 00:00	04:40:53	2.179	39.64	38.9
13/12/2019 00:00	04:41:03	2.193	39.892	39.2
13/12/2019 00:00	04:41:13	2.166	39.399	39.6
13/12/2019 00:00	04:41:23	2.16	39.298	40
13/12/2019 00:00	04:41:33	2.158	39.267	40.4
13/12/2019 00:00	04:41:43	2.156	39.224	40.8

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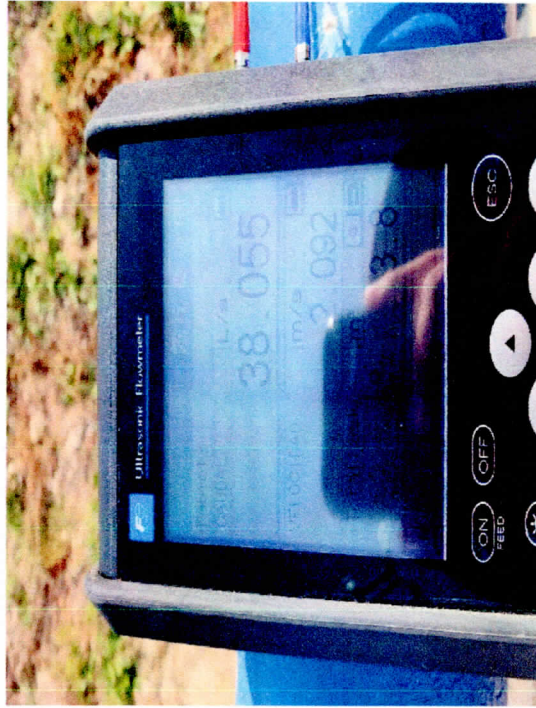
13/12/2019 00:00	04:41:53	2.158	39.254	41.2
13/12/2019 00:00	04:42:03	2.15	39.123	41.6
13/12/2019 00:00	04:42:13	2.133	38.8	42
13/12/2019 00:00	04:42:23	2.147	39.053	42.4
13/12/2019 00:00	04:42:33	2.119	38.55	42.8
13/12/2019 00:00	04:42:43	2.111	38.411	43.2
13/12/2019 00:00	04:42:53	2.133	38.8	43.5
13/12/2019 00:00	04:43:03	2.13	38.752	43.9
13/12/2019 00:00	04:43:13	2.142	38.977	44.3
13/12/2019 00:00	04:43:23	2.131	38.777	44.7
13/12/2019 00:00	04:43:33	2.132	38.784	45.1
13/12/2019 00:00	04:43:43	2.116	38.49	45.5
13/12/2019 00:00	04:43:53	2.121	38.59	45.9
13/12/2019 00:00	04:44:03	2.114	38.452	46.3
13/12/2019 00:00	04:44:13	2.136	38.861	46.6
13/12/2019 00:00	04:44:23	2.136	38.854	47
13/12/2019 00:00	04:44:33	2.138	38.895	47.4
13/12/2019 00:00	04:44:43	2.121	38.58	47.8
13/12/2019 00:00	04:44:53	2.039	37.091	48.2
13/12/2019 00:00	04:45:03	2.054	37.365	48.6
13/12/2019 00:00	04:45:13	2.048	37.257	48.9
13/12/2019 00:00	04:45:23	2.05	37.301	49.3
13/12/2019 00:00	04:45:33	2.045	37.197	49.7
13/12/2019 00:00	04:45:43	2.057	37.419	50
13/12/2019 00:00	04:45:53	2.047	37.246	50.4
13/12/2019 00:00	04:46:03	2.057	37.423	50.8
13/12/2019 00:00	04:46:13	2.059	37.453	51.2
13/12/2019 00:00	04:46:23	2.066	37.591	51.5
13/12/2019 00:00	04:46:33	1.922	34.974	51.9
13/12/2019 00:00	04:46:43	1.928	35.074	52.3
13/12/2019 00:00	04:46:53	1.984	36.091	52.6
13/12/2019 00:00	04:47:03	1.997	36.333	53
13/12/2019 00:00	04:47:13	2.017	36.697	53.3
13/12/2019 00:00	04:47:23	2.043	37.172	53.7
13/12/2019 00:00	04:47:33	2.034	37.012	54.1
13/12/2019 00:00	04:47:43	2.039	37.098	54.5
13/12/2019 00:00	04:47:53	2.044	37.196	54.8
13/12/2019 00:00	04:48:03	2.05	37.294	55.2
13/12/2019 00:00	04:48:13	2.038	37.083	55.6
13/12/2019 00:00	04:48:23	2.043	37.166	55.9
13/12/2019 00:00	04:48:33	2.034	37.01	56.3

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO FABIOLA



ING. JOSE SANTOS ESCAMILLA LOPEZ

13/12/2019 00:00	04:48:43	2.044	37.195	56.7
13/12/2019 00:00	04:48:53	2.042	37.156	57
13/12/2019 00:00	04:49:03	2.026	36.863	57.4
13/12/2019 00:00	04:49:13	2.044	37.184	57.8
13/12/2019 00:00	04:49:23	2.043	37.172	58.2
13/12/2019 00:00	04:49:33	2.044	37.187	58.5
13/12/2019 00:00	04:49:43	2.033	36.989	58.9
13/12/2019 00:00	04:49:53	2.03	36.94	59.3
13/12/2019 00:00	04:50:03	2.032	36.963	59.6
13/12/2019 00:00	04:50:13	2.031	36.943	60
13/12/2019 00:00	04:50:23	2.037	37.063	60.4
13/12/2019 00:00	04:50:33	2.021	36.768	60.7



**IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
MATEHUALA POZO PUNTE**



ING. JOSE SANTOS ESCAMILLA LOPEZ

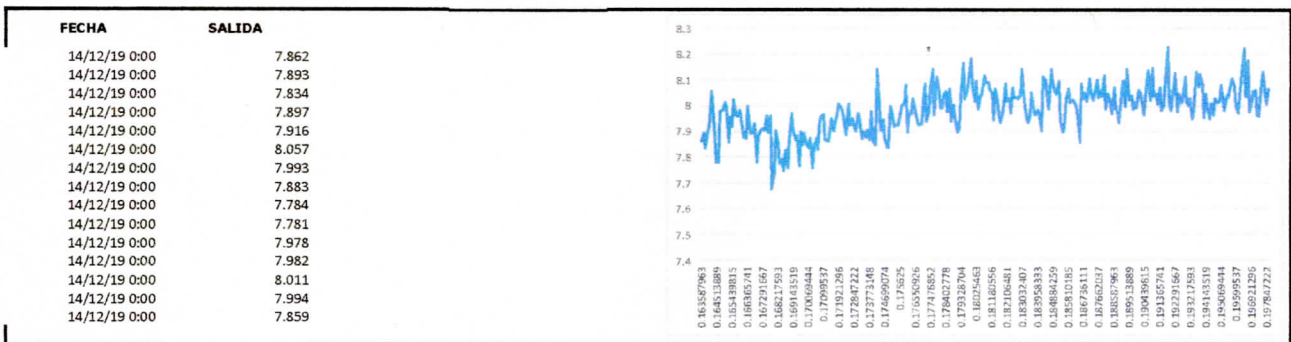
FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES			
Proyecto:			
No. Sitio:	Pozo Punte	Fuente de Abastecimiento:	
Sector:		Fecha de Inicio de Registro:	14 de Dic 2019
Calle:		Fecha de fin de registro:	14 de Dic 2019
Colonia:		Hora:	15:55
GPS:	Latitud 23°52'17.21"N 60 min Estiaje:	Longitud 100°49'24.75"W	Altitud: 1745 MSNM

Tiempo de Op.

Tiempo sin Operación:

MEDIDOR			
Tipo:	Caudalimetro por ultrasonico	Modelo	Portaflow X
		No. Serie	S10A2-00Y
Caudal Puntual:	7.98 LPS	No. De Medidor Ultrasonico	S/M
		Modelo	

GRÁFICA DE CAUDAL



Fotografía del macro medidor

Fotografía del medidor ultrasonico



Referencias del sitio de Medición:

Observaciones:

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO PUENTE



ING. JOSE SANTOS ESCAMILLA LOPEZ

Puente		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
14/12/2019 00:00	03:55:34	0.981	7.862	78
14/12/2019 00:00	03:55:44	0.985	7.893	78
14/12/2019 00:00	03:55:54	0.978	7.834	0
14/12/2019 00:00	03:56:04	0.986	7.897	0.1
14/12/2019 00:00	03:56:14	0.988	7.916	0.1
14/12/2019 00:00	03:56:24	1.006	8.057	0.2
14/12/2019 00:00	03:56:34	0.998	7.993	0.3
14/12/2019 00:00	03:56:44	0.984	7.883	0.4
14/12/2019 00:00	03:56:54	0.971	7.784	0.5
14/12/2019 00:00	03:57:04	0.971	7.781	0.5
14/12/2019 00:00	03:57:14	0.996	7.978	0.6
14/12/2019 00:00	03:57:24	0.996	7.982	0.7
14/12/2019 00:00	03:57:34	1	8.011	0.8
14/12/2019 00:00	03:57:44	0.998	7.994	0.9
14/12/2019 00:00	03:57:54	0.981	7.859	0.9
14/12/2019 00:00	03:58:04	0.993	7.957	1
14/12/2019 00:00	03:58:14	0.989	7.923	1.1
14/12/2019 00:00	03:58:24	1.001	8.023	1.2
14/12/2019 00:00	03:58:34	0.994	7.964	1.3
14/12/2019 00:00	03:58:44	0.993	7.958	1.3
14/12/2019 00:00	03:58:54	0.996	7.982	1.4
14/12/2019 00:00	03:59:04	0.992	7.949	1.5
14/12/2019 00:00	03:59:14	0.983	7.879	1.6
14/12/2019 00:00	03:59:24	0.983	7.873	1.6
14/12/2019 00:00	03:59:34	0.998	7.997	1.7
14/12/2019 00:00	03:59:44	0.99	7.934	1.8
14/12/2019 00:00	03:59:54	0.985	7.894	1.9
14/12/2019 00:00	04:00:04	0.986	7.898	2
14/12/2019 00:00	04:00:14	0.99	7.93	2
14/12/2019 00:00	04:00:24	0.972	7.784	2.1
14/12/2019 00:00	04:00:34	0.984	7.883	2.2
14/12/2019 00:00	04:00:44	0.987	7.909	2.3
14/12/2019 00:00	04:00:54	0.987	7.911	2.4
14/12/2019 00:00	04:01:04	0.987	7.906	2.4
14/12/2019 00:00	04:01:14	0.994	7.961	2.5
14/12/2019 00:00	04:01:24	0.986	7.897	2.6
14/12/2019 00:00	04:01:34	0.994	7.962	2.7

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO PUENTE



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	04:01:44	0.958	7.677	2.8
14/12/2019 00:00	04:01:54	0.965	7.733	2.8
14/12/2019 00:00	04:02:04	0.986	7.901	2.9
14/12/2019 00:00	04:02:14	0.98	7.854	3
14/12/2019 00:00	04:02:24	0.97	7.776	3.1
14/12/2019 00:00	04:02:34	0.972	7.79	3.1
14/12/2019 00:00	04:02:44	0.967	7.747	3.2
14/12/2019 00:00	04:02:54	0.977	7.828	3.3
14/12/2019 00:00	04:03:04	0.969	7.76	3.4
14/12/2019 00:00	04:03:14	0.982	7.87	3.5
14/12/2019 00:00	04:03:24	0.995	7.97	3.5
14/12/2019 00:00	04:03:34	0.987	7.906	3.6
14/12/2019 00:00	04:03:44	0.982	7.869	3.7
14/12/2019 00:00	04:03:54	0.984	7.882	3.8
14/12/2019 00:00	04:04:04	0.97	7.77	3.9
14/12/2019 00:00	04:04:14	0.986	7.898	3.9
14/12/2019 00:00	04:04:24	0.98	7.848	4
14/12/2019 00:00	04:04:34	0.985	7.892	4.1
14/12/2019 00:00	04:04:44	0.98	7.853	4.2
14/12/2019 00:00	04:04:54	0.978	7.835	4.2
14/12/2019 00:00	04:05:04	0.982	7.872	4.3
14/12/2019 00:00	04:05:14	0.969	7.761	4.4
14/12/2019 00:00	04:05:24	0.978	7.837	4.5
14/12/2019 00:00	04:05:34	0.983	7.873	4.6
14/12/2019 00:00	04:05:44	0.977	7.83	4.6
14/12/2019 00:00	04:05:54	0.992	7.946	4.7
14/12/2019 00:00	04:06:04	0.994	7.962	4.8
14/12/2019 00:00	04:06:14	0.994	7.964	4.9
14/12/2019 00:00	04:06:24	0.982	7.871	5
14/12/2019 00:00	04:06:34	0.981	7.862	5
14/12/2019 00:00	04:06:44	0.982	7.864	5.1
14/12/2019 00:00	04:06:54	0.992	7.95	5.2
14/12/2019 00:00	04:07:04	0.986	7.903	5.3
14/12/2019 00:00	04:07:14	0.99	7.934	5.3
14/12/2019 00:00	04:07:24	0.994	7.965	5.4
14/12/2019 00:00	04:07:34	1	8.009	5.5
14/12/2019 00:00	04:07:44	0.997	7.992	5.6
14/12/2019 00:00	04:07:54	0.996	7.983	5.7
14/12/2019 00:00	04:08:04	0.989	7.924	5.7
14/12/2019 00:00	04:08:14	0.984	7.886	5.8

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 POZO PUENTE



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	04:08:24	1	8.009	5.9
14/12/2019 00:00	04:08:34	0.989	7.925	6
14/12/2019 00:00	04:08:44	0.992	7.949	6.1
14/12/2019 00:00	04:08:54	0.988	7.916	6.1
14/12/2019 00:00	04:09:04	0.986	7.903	6.2
14/12/2019 00:00	04:09:14	0.995	7.971	6.3
14/12/2019 00:00	04:09:24	0.991	7.942	6.4
14/12/2019 00:00	04:09:34	0.983	7.874	6.5
14/12/2019 00:00	04:09:44	0.986	7.9	6.5
14/12/2019 00:00	04:09:54	0.983	7.878	6.6
14/12/2019 00:00	04:10:04	0.987	7.905	6.7
14/12/2019 00:00	04:10:14	0.982	7.868	6.8
14/12/2019 00:00	04:10:24	0.996	7.977	6.9
14/12/2019 00:00	04:10:34	0.981	7.863	6.9
14/12/2019 00:00	04:10:44	0.98	7.85	7
14/12/2019 00:00	04:10:54	1.016	8.143	7.1
14/12/2019 00:00	04:11:04	0.999	8.007	7.2
14/12/2019 00:00	04:11:14	0.987	7.908	7.3
14/12/2019 00:00	04:11:24	0.992	7.945	7.3
14/12/2019 00:00	04:11:34	0.983	7.873	7.4
14/12/2019 00:00	04:11:44	0.979	7.841	7.5
14/12/2019 00:00	04:11:54	0.978	7.839	7.6
14/12/2019 00:00	04:12:04	0.998	8	7.6
14/12/2019 00:00	04:12:14	0.996	7.983	7.7
14/12/2019 00:00	04:12:24	0.989	7.921	7.8
14/12/2019 00:00	04:12:34	0.99	7.928	7.9
14/12/2019 00:00	04:12:44	0.99	7.928	8
14/12/2019 00:00	04:12:54	0.995	7.974	8
14/12/2019 00:00	04:13:04	0.999	8.003	8.1
14/12/2019 00:00	04:13:14	0.999	8.008	8.2
14/12/2019 00:00	04:13:24	1.009	8.081	8.3
14/12/2019 00:00	04:13:34	0.986	7.899	8.4
14/12/2019 00:00	04:13:44	0.995	7.97	8.4
14/12/2019 00:00	04:13:54	0.995	7.971	8.5
14/12/2019 00:00	04:14:04	1.002	8.029	8.6
14/12/2019 00:00	04:14:14	0.996	7.979	8.7
14/12/2019 00:00	04:14:24	0.99	7.931	8.8
14/12/2019 00:00	04:14:34	0.989	7.926	8.8
14/12/2019 00:00	04:14:44	0.99	7.93	8.9
14/12/2019 00:00	04:14:54	1.001	8.02	9

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14/12/2019 00:00	04:15:04	1.009	8.084	9.1
14/12/2019 00:00	04:15:14	0.991	7.941	9.2
14/12/2019 00:00	04:15:24	0.996	7.98	9.2
14/12/2019 00:00	04:15:34	1.008	8.072	9.3
14/12/2019 00:00	04:15:44	1.016	8.142	9.4
14/12/2019 00:00	04:15:54	0.994	7.965	9.5
14/12/2019 00:00	04:16:04	1.013	8.115	9.6
14/12/2019 00:00	04:16:14	1.006	8.058	9.6
14/12/2019 00:00	04:16:24	0.998	7.992	9.7
14/12/2019 00:00	04:16:34	0.998	7.993	9.8
14/12/2019 00:00	04:16:44	1.003	8.036	9.9
14/12/2019 00:00	04:16:54	1.006	8.057	10
14/12/2019 00:00	04:17:04	0.996	7.979	10
14/12/2019 00:00	04:17:14	1.007	8.066	10.1
14/12/2019 00:00	04:17:24	0.991	7.942	10.2
14/12/2019 00:00	04:17:34	0.999	8.002	10.3
14/12/2019 00:00	04:17:44	0.993	7.955	10.4
14/12/2019 00:00	04:17:54	0.986	7.896	10.4
14/12/2019 00:00	04:18:04	0.987	7.91	10.5
14/12/2019 00:00	04:18:14	1.002	8.031	10.6
14/12/2019 00:00	04:18:24	1.019	8.165	10.7
14/12/2019 00:00	04:18:34	1.002	8.029	10.8
14/12/2019 00:00	04:18:44	1.006	8.058	10.8
14/12/2019 00:00	04:18:54	1.011	8.097	10.9
14/12/2019 00:00	04:19:04	1.022	8.186	11
14/12/2019 00:00	04:19:14	1.009	8.084	11.1
14/12/2019 00:00	04:19:24	1.001	8.018	11.2
14/12/2019 00:00	04:19:34	1.01	8.093	11.3
14/12/2019 00:00	04:19:44	0.997	7.99	11.3
14/12/2019 00:00	04:19:54	1.004	8.042	11.4
14/12/2019 00:00	04:20:04	1.005	8.048	11.5
14/12/2019 00:00	04:20:14	1.013	8.117	11.6
14/12/2019 00:00	04:20:24	1.01	8.09	11.7
14/12/2019 00:00	04:20:34	1.009	8.087	11.7
14/12/2019 00:00	04:20:44	1.007	8.065	11.8
14/12/2019 00:00	04:20:54	1.005	8.049	11.9
14/12/2019 00:00	04:21:04	0.991	7.944	12
14/12/2019 00:00	04:21:14	1.007	8.065	12.1
14/12/2019 00:00	04:21:24	1.003	8.039	12.1
14/12/2019 00:00	04:21:34	0.993	7.954	12.2

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14/12/2019 00:00	04:21:44	0.99	7.936	12.3
14/12/2019 00:00	04:21:54	0.996	7.983	12.4
14/12/2019 00:00	04:22:04	1.009	8.086	12.5
14/12/2019 00:00	04:22:14	1	8.016	12.5
14/12/2019 00:00	04:22:24	1.002	8.028	12.6
14/12/2019 00:00	04:22:34	0.995	7.973	12.7
14/12/2019 00:00	04:22:44	1.007	8.071	12.8
14/12/2019 00:00	04:22:54	1.003	8.034	12.9
14/12/2019 00:00	04:23:04	1.003	8.034	12.9
14/12/2019 00:00	04:23:14	1.002	8.025	13
14/12/2019 00:00	04:23:24	1.004	8.041	13.1
14/12/2019 00:00	04:23:34	1.016	8.141	13.2
14/12/2019 00:00	04:23:44	1.001	8.019	13.3
14/12/2019 00:00	04:23:54	0.992	7.947	13.3
14/12/2019 00:00	04:24:04	0.99	7.934	13.4
14/12/2019 00:00	04:24:14	0.994	7.966	13.5
14/12/2019 00:00	04:24:24	1.005	8.052	13.6
14/12/2019 00:00	04:24:34	0.996	7.979	13.7
14/12/2019 00:00	04:24:44	0.994	7.967	13.7
14/12/2019 00:00	04:24:54	0.996	7.983	13.8
14/12/2019 00:00	04:25:04	0.995	7.973	13.9
14/12/2019 00:00	04:25:14	0.987	7.904	14
14/12/2019 00:00	04:25:24	1.013	8.114	14.1
14/12/2019 00:00	04:25:34	1.011	8.101	14.1
14/12/2019 00:00	04:25:44	1.001	8.023	14.2
14/12/2019 00:00	04:25:54	0.997	7.988	14.3
14/12/2019 00:00	04:26:04	1.016	8.14	14.4
14/12/2019 00:00	04:26:14	1.01	8.089	14.5
14/12/2019 00:00	04:26:24	1.005	8.056	14.5
14/12/2019 00:00	04:26:34	1.004	8.045	14.6
14/12/2019 00:00	04:26:44	1.01	8.096	14.7
14/12/2019 00:00	04:26:54	0.991	7.94	14.8
14/12/2019 00:00	04:27:04	0.986	7.898	14.9
14/12/2019 00:00	04:27:14	0.988	7.913	14.9
14/12/2019 00:00	04:27:24	1.002	8.026	15
14/12/2019 00:00	04:27:34	1.006	8.063	15.1
14/12/2019 00:00	04:27:44	1	8.011	15.2
14/12/2019 00:00	04:27:54	1.002	8.024	15.3
14/12/2019 00:00	04:28:04	1.001	8.018	15.3
14/12/2019 00:00	04:28:14	0.998	7.999	15.4

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14/12/2019 00:00	04:28:24	0.993	7.958	15.5
14/12/2019 00:00	04:28:34	0.981	7.859	15.6
14/12/2019 00:00	04:28:44	1.009	8.086	15.7
14/12/2019 00:00	04:28:54	1.002	8.028	15.7
14/12/2019 00:00	04:29:04	1.005	8.052	15.8
14/12/2019 00:00	04:29:14	1.001	8.017	15.9
14/12/2019 00:00	04:29:24	1.012	8.105	16
14/12/2019 00:00	04:29:34	1.006	8.058	16.1
14/12/2019 00:00	04:29:44	1.001	8.022	16.1
14/12/2019 00:00	04:29:54	1.004	8.047	16.2
14/12/2019 00:00	04:30:04	1.011	8.098	16.3
14/12/2019 00:00	04:30:14	1.003	8.033	16.4
14/12/2019 00:00	04:30:24	1.006	8.058	16.5
14/12/2019 00:00	04:30:34	1.003	8.036	16.5
14/12/2019 00:00	04:30:44	1.013	8.116	16.6
14/12/2019 00:00	04:30:54	0.997	7.991	16.7
14/12/2019 00:00	04:31:04	1.004	8.044	16.8
14/12/2019 00:00	04:31:14	1	8.009	16.9
14/12/2019 00:00	04:31:24	0.994	7.968	17
14/12/2019 00:00	04:31:34	1.007	8.072	17
14/12/2019 00:00	04:31:44	0.997	7.989	17.1
14/12/2019 00:00	04:31:54	0.996	7.978	17.2
14/12/2019 00:00	04:32:04	0.991	7.937	17.3
14/12/2019 00:00	04:32:14	1.004	8.046	17.4
14/12/2019 00:00	04:32:24	1.01	8.095	17.4
14/12/2019 00:00	04:32:34	0.998	7.998	17.5
14/12/2019 00:00	04:32:44	1.016	8.14	17.6
14/12/2019 00:00	04:32:54	1.001	8.022	17.7
14/12/2019 00:00	04:33:04	1.003	8.036	17.8
14/12/2019 00:00	04:33:14	0.997	7.987	17.8
14/12/2019 00:00	04:33:24	1	8.011	17.9
14/12/2019 00:00	04:33:34	0.998	7.994	18
14/12/2019 00:00	04:33:44	1.006	8.062	18.1
14/12/2019 00:00	04:33:54	1.005	8.052	18.2
14/12/2019 00:00	04:34:04	0.998	7.996	18.2
14/12/2019 00:00	04:34:14	0.994	7.966	18.3
14/12/2019 00:00	04:34:24	1.01	8.093	18.4
14/12/2019 00:00	04:34:34	1.015	8.135	18.5
14/12/2019 00:00	04:34:44	1.001	8.023	18.6
14/12/2019 00:00	04:34:54	1.017	8.148	18.6

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO PUENTE



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	04:35:04	1.003	8.036	18.7
14/12/2019 00:00	04:35:14	1.004	8.046	18.8
14/12/2019 00:00	04:35:24	1	8.01	18.9
14/12/2019 00:00	04:35:34	1.007	8.07	19
14/12/2019 00:00	04:35:44	0.997	7.985	19
14/12/2019 00:00	04:35:54	0.999	8.001	19.1
14/12/2019 00:00	04:36:04	1.012	8.108	19.2
14/12/2019 00:00	04:36:14	1.027	8.228	19.3
14/12/2019 00:00	04:36:24	1.001	8.018	19.4
14/12/2019 00:00	04:36:34	0.996	7.982	19.4
14/12/2019 00:00	04:36:44	1.008	8.074	19.5
14/12/2019 00:00	04:36:54	1.014	8.126	19.6
14/12/2019 00:00	04:37:04	0.996	7.977	19.7
14/12/2019 00:00	04:37:14	1.004	8.044	19.8
14/12/2019 00:00	04:37:24	1	8.014	19.8
14/12/2019 00:00	04:37:34	1.001	8.023	19.9
14/12/2019 00:00	04:37:44	1.013	8.112	20
14/12/2019 00:00	04:37:54	1	8.014	20.1
14/12/2019 00:00	04:38:04	0.999	8.002	20.2
14/12/2019 00:00	04:38:14	1.002	8.027	20.2
14/12/2019 00:00	04:38:24	0.992	7.949	20.3
14/12/2019 00:00	04:38:34	0.996	7.979	20.4
14/12/2019 00:00	04:38:44	1.015	8.133	20.5
14/12/2019 00:00	04:38:54	1.008	8.073	20.6
14/12/2019 00:00	04:39:04	1.014	8.124	20.6
14/12/2019 00:00	04:39:14	1.008	8.078	20.7
14/12/2019 00:00	04:39:24	0.993	7.957	20.8
14/12/2019 00:00	04:39:34	1.004	8.044	20.9
14/12/2019 00:00	04:39:44	0.999	8.001	21
14/12/2019 00:00	04:39:54	0.992	7.952	21
14/12/2019 00:00	04:40:04	1	8.01	21.1
14/12/2019 00:00	04:40:14	0.994	7.964	21.2
14/12/2019 00:00	04:40:24	1.002	8.029	21.3
14/12/2019 00:00	04:40:34	1	8.012	21.4
14/12/2019 00:00	04:40:44	1	8.016	21.5
14/12/2019 00:00	04:40:54	1.008	8.079	21.5
14/12/2019 00:00	04:41:04	1.002	8.029	21.6
14/12/2019 00:00	04:41:14	0.997	7.986	21.7
14/12/2019 00:00	04:41:24	1.003	8.035	21.8
14/12/2019 00:00	04:41:34	1.003	8.033	21.9

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO PUENTE



ING. JOSE SANTOS ESCAMILLA LOPEZ

14/12/2019 00:00	04:41:44	1.008	8.08	21.9
14/12/2019 00:00	04:41:54	1.011	8.103	22
14/12/2019 00:00	04:42:04	1.008	8.073	22.1
14/12/2019 00:00	04:42:14	0.998	7.999	22.2
14/12/2019 00:00	04:42:24	0.995	7.976	22.3
14/12/2019 00:00	04:42:34	1.006	8.064	22.3
14/12/2019 00:00	04:42:44	1.014	8.127	22.4
14/12/2019 00:00	04:42:54	1.027	8.224	22.5
14/12/2019 00:00	04:43:04	1.003	8.036	22.6
14/12/2019 00:00	04:43:14	1.02	8.175	22.7
14/12/2019 00:00	04:43:24	0.996	7.981	22.7
14/12/2019 00:00	04:43:34	1.001	8.018	22.8
14/12/2019 00:00	04:43:44	1.006	8.057	22.9
14/12/2019 00:00	04:43:54	1.006	8.059	23
14/12/2019 00:00	04:44:04	0.994	7.963	23.1
14/12/2019 00:00	04:44:14	0.993	7.959	23.1
14/12/2019 00:00	04:44:24	1.01	8.089	23.2
14/12/2019 00:00	04:44:34	1.015	8.134	23.3
14/12/2019 00:00	04:44:44	1.003	8.04	23.4
14/12/2019 00:00	04:44:54	0.999	8.007	23.5
14/12/2019 00:00	04:45:04	1.006	8.063	23.5





IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
MATEHUALA POZO 17



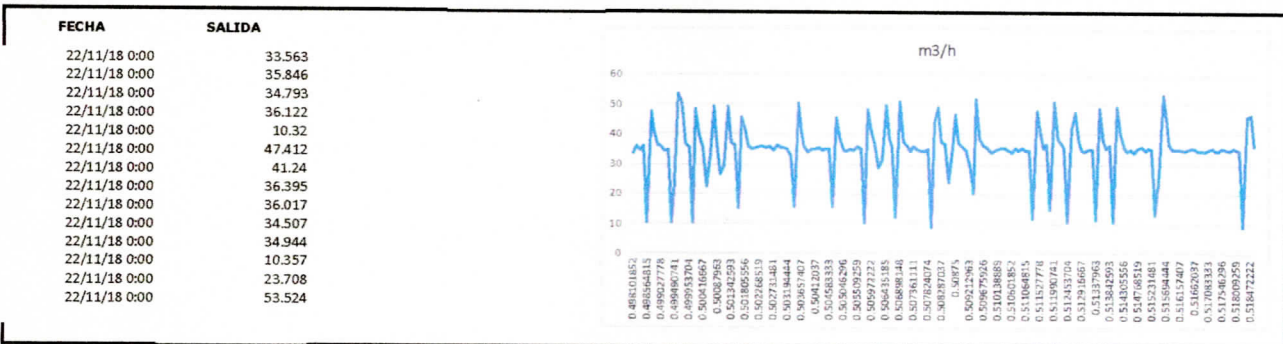
ING. JOSE SANTOS ESCAMILLA LOPEZ

FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES			
Proyecto:			
No. Sitio:	Pozo 17	Fuente de Abastecimiento:	
Sector:		Fecha de Inicio de Registro:	11 de Dic 2019
Calle:		Fecha de fin de registro:	11 de Dic 2019
Colonia:		Hora:	1:29pm
GPS:	Latitud 23°53'17.00"N	Longitud 100°50'45.70"W	Altitud: 1745 MSNM
	60 min	Estiaje:	

Tiempo de Op. Tiempo sin Operación:

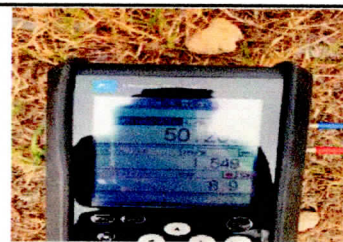
MEDIDOR			
Tipo:	Caudalimetro por ultrasonico	Modelo	Portaflow X
		No. Serie	S10A2-00Y
Caudal Puntual:	50.2 LPS	No. De Medidor Ultrasonico	S/M
		Modelo	

GRÁFICA DE CAUDAL



Fotografía del macro medidor

Fotografía del medidor ultrasonico



Referencias del sitio de Medición:

Observaciones:

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 17



ING. JOSE SANTOS ESCAMILLA LOPEZ

4	'VELOCITY	'FLOW RATE	'+TOTALIZER
	m/s	L/s	m3
12/12/2019 04:28	1.53	49.638	4.4
12/12/2019 04:28	1.534	49.759	4.9
12/12/2019 04:28	1.531	49.674	5.4
12/12/2019 04:29	1.528	49.581	5.8
12/12/2019 04:29	1.547	50.18	6.2
12/12/2019 04:29	1.558	50.528	6.7
12/12/2019 04:29	1.567	50.83	7.2
12/12/2019 04:29	1.53	49.618	7.7
12/12/2019 04:29	1.534	49.757	8.2
12/12/2019 04:30	1.548	50.206	8.7
12/12/2019 04:30	1.566	50.791	9.2
12/12/2019 04:30	1.533	49.743	9.7
12/12/2019 04:30	1.54	49.969	10.2
12/12/2019 04:30	1.562	50.669	10.7
12/12/2019 04:30	1.546	50.143	11.2
12/12/2019 04:31	1.54	49.952	11.7
12/12/2019 04:31	1.563	50.709	12.2
12/12/2019 04:31	1.547	50.17	12.7
12/12/2019 04:31	1.52	49.31	13.2
12/12/2019 04:31	1.53	49.628	13.7
12/12/2019 04:31	1.513	49.071	14.2
12/12/2019 04:32	1.535	49.786	14.7
12/12/2019 04:32	1.539	49.936	15.2
12/12/2019 04:32	1.521	49.327	15.7
12/12/2019 04:32	1.546	50.165	16.2
12/12/2019 04:32	1.557	50.494	16.7
12/12/2019 04:32	1.525	49.465	17.2
12/12/2019 04:33	1.544	50.097	17.7
12/12/2019 04:33	1.544	50.071	18.2
12/12/2019 04:33	1.549	50.257	18.7
12/12/2019 04:33	1.555	50.432	19.2
12/12/2019 04:33	1.544	50.097	19.7
12/12/2019 04:33	1.563	50.715	20.2
12/12/2019 04:34	1.531	49.65	20.7
12/12/2019 04:34	1.525	49.456	21.2
12/12/2019 04:34	1.53	49.635	21.7
12/12/2019 04:34	1.542	50.005	22.2
12/12/2019 04:34	1.543	50.051	22.7
12/12/2019 04:34	1.542	50.009	23.2

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO 17



ING. JOSE SANTOS ESCAMILLA LOPEZ

12/12/2019 04:35	1.526	49.504	23.7
12/12/2019 04:35	1.54	49.967	24.2
12/12/2019 04:35	1.55	50.282	24.7
12/12/2019 04:35	1.564	50.733	25.2
12/12/2019 04:35	1.552	50.337	25.7
12/12/2019 04:35	1.561	50.63	26.2
12/12/2019 04:36	1.56	50.609	26.7
12/12/2019 04:36	1.55	50.273	27.2
12/12/2019 04:36	1.535	49.783	27.7
12/12/2019 04:36	1.539	49.912	28.2
12/12/2019 04:36	1.531	49.668	28.7
12/12/2019 04:36	1.554	50.399	29.2
12/12/2019 04:37	1.546	50.142	29.7
12/12/2019 04:37	1.555	50.434	30.2
12/12/2019 04:37	1.538	49.887	30.7
12/12/2019 04:37	1.551	50.32	31.2
12/12/2019 04:37	1.549	50.258	31.7
12/12/2019 04:37	1.542	50.035	32.2
12/12/2019 04:38	1.546	50.14	32.7
12/12/2019 04:38	1.564	50.748	33.2
12/12/2019 04:38	1.551	50.309	33.7
12/12/2019 04:38	1.567	50.847	34.2
12/12/2019 04:38	1.539	49.934	34.7
12/12/2019 04:38	1.548	50.211	35.2
12/12/2019 04:39	1.537	49.85	35.7
12/12/2019 04:39	1.569	50.887	36.2
12/12/2019 04:39	1.54	49.942	36.7
12/12/2019 04:39	1.547	50.173	37.2
12/12/2019 04:39	1.566	50.784	37.7
12/12/2019 04:39	1.554	50.421	38.2
12/12/2019 04:40	1.562	50.685	38.7
12/12/2019 04:40	1.58	51.243	39.2
12/12/2019 04:40	1.552	50.354	39.8
12/12/2019 04:40	1.571	50.965	40.3
12/12/2019 04:40	1.557	50.494	40.8
12/12/2019 04:40	1.549	50.258	41.3
12/12/2019 04:41	1.541	49.99	41.8
12/12/2019 04:41	1.559	50.565	42.3
12/12/2019 04:41	1.548	50.217	42.8
12/12/2019 04:41	1.537	49.851	43.3
12/12/2019 04:41	1.557	50.504	43.8

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO 17



ING. JOSE SANTOS ESCAMILLA LOPEZ

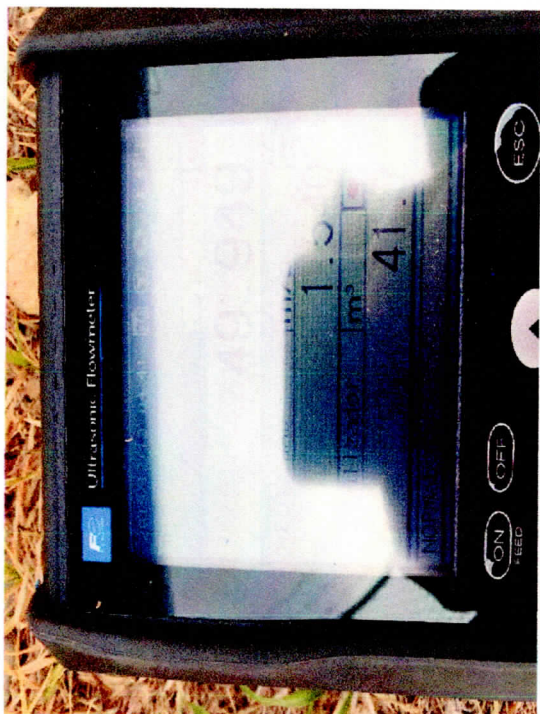
12/12/2019 04:41	1.574	51.062	44.3
12/12/2019 04:42	1.55	50.291	44.8
12/12/2019 04:42	1.568	50.866	45.3
12/12/2019 04:42	1.54	49.946	45.8
12/12/2019 04:42	1.563	50.71	46.3
12/12/2019 04:42	1.568	50.856	46.8
12/12/2019 04:42	1.57	50.934	47.3
12/12/2019 04:43	1.546	50.138	47.8
12/12/2019 04:43	1.537	49.865	48.3
12/12/2019 04:43	1.559	50.561	48.8
12/12/2019 04:43	1.558	50.554	49.3
12/12/2019 04:43	1.569	50.895	49.9
12/12/2019 04:43	1.55	50.296	50.4
12/12/2019 04:44	1.541	49.985	50.9
12/12/2019 04:44	1.558	50.53	51.4
12/12/2019 04:44	1.535	49.805	51.9
12/12/2019 04:44	1.561	50.622	52.4
12/12/2019 04:44	1.556	50.477	52.9
12/12/2019 04:44	1.536	49.835	53.4
12/12/2019 04:45	1.557	50.5	53.9
12/12/2019 04:45	1.562	50.657	54.4
12/12/2019 04:45	1.557	50.513	54.9
12/12/2019 04:45	1.563	50.697	55.4
12/12/2019 04:45	1.536	49.815	55.9
12/12/2019 04:45	1.553	50.393	56.4
12/12/2019 04:46	1.557	50.514	56.9
12/12/2019 04:46	1.537	49.859	57.4
12/12/2019 04:46	1.546	50.136	57.9
12/12/2019 04:46	1.559	50.562	58.4
12/12/2019 04:46	1.56	50.603	58.9
12/12/2019 04:46	1.568	50.88	59.4
12/12/2019 04:47	1.578	51.195	59.9
12/12/2019 04:47	1.546	50.146	60.4
12/12/2019 04:47	1.546	50.143	60.9
12/12/2019 04:47	1.551	50.302	61.4
12/12/2019 04:47	1.546	50.163	61.9
12/12/2019 04:47	1.538	49.886	62.4
12/12/2019 04:48	1.534	49.768	62.9
12/12/2019 04:48	1.557	50.502	63.4
12/12/2019 04:48	1.562	50.674	63.9
12/12/2019 04:48	1.547	50.169	64.5

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO 17



ING. JOSE SANTOS ESCAMILLA LOPEZ

12/12/2019 04:48	1.524	49.423	65
12/12/2019 04:48	1.53	49.632	65.5
12/12/2019 04:49	1.549	50.255	66
12/12/2019 04:49	1.54	49.973	66.5
12/12/2019 04:49	1.557	50.512	67
12/12/2019 04:49	1.564	50.736	67.5
12/12/2019 04:49	1.54	49.97	68
12/12/2019 04:49	1.54	49.948	68.5
12/12/2019 04:50	1.571	50.956	69
12/12/2019 04:50	1.549	50.246	69.5
12/12/2019 04:50	1.558	50.531	70
12/12/2019 04:50	1.552	50.336	70.5
12/12/2019 04:50	1.558	50.539	71
12/12/2019 04:50	1.539	49.91	71.5
12/12/2019 04:51	1.558	50.533	72
12/12/2019 04:51	1.556	50.481	72.5
12/12/2019 04:51	1.564	50.746	73
12/12/2019 04:51	1.54	49.945	73.5
12/12/2019 04:51	1.55	50.275	74
12/12/2019 04:51	1.534	49.771	74.5
12/12/2019 04:52	1.557	50.493	75
12/12/2019 04:52	1.551	50.315	75.5
12/12/2019 04:52	1.549	50.245	76
12/12/2019 04:52	1.562	50.66	76.5
12/12/2019 04:52	1.543	50.068	77
12/12/2019 04:52	1.542	50.035	77.5
12/12/2019 04:53	1.56	50.597	78
12/12/2019 04:53	1.54	49.953	78.5



IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO18



ING. JOSE SANTOS ESCAMILLA LOPEZ

18		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
13/12/2019 00:00	05:14:07	1.128	9.16	0.7
13/12/2019 00:00	05:14:17	1.12	9.1	0
13/12/2019 00:00	05:14:27	1.127	9.158	0.1
13/12/2019 00:00	05:14:37	1.126	9.147	0.2
13/12/2019 00:00	05:14:47	1.119	9.089	0.3
13/12/2019 00:00	05:14:57	1.131	9.185	0.4
13/12/2019 00:00	05:15:07	1.129	9.174	0.4
13/12/2019 00:00	05:15:17	1.134	9.211	0.5
13/12/2019 00:00	05:15:27	1.134	9.211	0.6
13/12/2019 00:00	05:15:37	1.127	9.158	0.7
13/12/2019 00:00	05:15:47	1.129	9.173	0.8
13/12/2019 00:00	05:15:57	1.129	9.168	0.9
13/12/2019 00:00	05:16:07	1.118	9.082	1
13/12/2019 00:00	05:16:17	1.125	9.136	1.1
13/12/2019 00:00	05:16:27	1.128	9.167	1.2
13/12/2019 00:00	05:16:37	1.132	9.197	1.3
13/12/2019 00:00	05:16:47	1.13	9.177	1.4
13/12/2019 00:00	05:16:57	1.133	9.207	1.5
13/12/2019 00:00	05:17:07	1.126	9.145	1.5
13/12/2019 00:00	05:17:17	1.132	9.198	1.6
13/12/2019 00:00	05:17:27	1.128	9.16	1.7
13/12/2019 00:00	05:17:37	1.135	9.22	1.8
13/12/2019 00:00	05:17:47	1.124	9.129	1.9
13/12/2019 00:00	05:17:57	1.137	9.233	2
13/12/2019 00:00	05:18:07	1.135	9.223	2.1
13/12/2019 00:00	05:18:17	1.127	9.152	2.2
13/12/2019 00:00	05:18:27	1.118	9.085	2.3
13/12/2019 00:00	05:18:37	1.137	9.24	2.4
13/12/2019 00:00	05:18:47	1.148	9.324	2.5
13/12/2019 00:00	05:18:57	1.139	9.251	2.6
13/12/2019 00:00	05:19:07	1.131	9.19	2.7
13/12/2019 00:00	05:19:17	1.139	9.249	2.7
13/12/2019 00:00	05:19:27	1.128	9.163	2.8
13/12/2019 00:00	05:19:37	1.128	9.163	2.9
13/12/2019 00:00	05:19:47	1.127	9.156	3
13/12/2019 00:00	05:19:57	1.129	9.168	3.1
13/12/2019 00:00	05:20:07	1.126	9.144	3.2
13/12/2019 00:00	05:20:17	1.141	9.268	3.3

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO18



ING. JOSE SANTOS ESCAMILLA LOPEZ

13/12/2019 00:00	05:20:27	1.135	9.221	3.4
13/12/2019 00:00	05:20:37	1.138	9.247	3.5
13/12/2019 00:00	05:20:47	1.123	9.123	3.6
13/12/2019 00:00	05:20:57	1.129	9.172	3.7
13/12/2019 00:00	05:21:07	1.14	9.258	3.8
13/12/2019 00:00	05:21:17	1.133	9.204	3.8
13/12/2019 00:00	05:21:27	1.131	9.186	3.9
13/12/2019 00:00	05:21:37	1.138	9.244	4
13/12/2019 00:00	05:21:47	1.131	9.186	4.1
13/12/2019 00:00	05:21:57	1.123	9.12	4.2
13/12/2019 00:00	05:22:07	1.122	9.116	4.3
13/12/2019 00:00	05:22:17	1.135	9.223	4.4
13/12/2019 00:00	05:22:27	1.129	9.171	4.5
13/12/2019 00:00	05:22:37	1.146	9.306	4.6
13/12/2019 00:00	05:22:47	1.146	9.311	4.7
13/12/2019 00:00	05:22:57	1.125	9.137	4.8
13/12/2019 00:00	05:23:07	1.133	9.2	4.9
13/12/2019 00:00	05:23:17	1.133	9.203	5
13/12/2019 00:00	05:23:27	1.132	9.197	5
13/12/2019 00:00	05:23:37	1.132	9.195	5.1
13/12/2019 00:00	05:23:47	1.136	9.23	5.2
13/12/2019 00:00	05:23:57	1.135	9.223	5.3
13/12/2019 00:00	05:24:07	1.132	9.196	5.4
13/12/2019 00:00	05:24:17	1.126	9.147	5.5
13/12/2019 00:00	05:24:27	1.143	9.284	5.6
13/12/2019 00:00	05:24:37	1.126	9.148	5.7
13/12/2019 00:00	05:24:47	1.133	9.203	5.8
13/12/2019 00:00	05:24:57	1.136	9.23	5.9
13/12/2019 00:00	05:25:07	1.133	9.207	6
13/12/2019 00:00	05:25:17	1.133	9.206	6.1
13/12/2019 00:00	05:25:27	1.137	9.233	6.1
13/12/2019 00:00	05:25:37	1.118	9.084	6.2
13/12/2019 00:00	05:25:47	1.134	9.215	6.3
13/12/2019 00:00	05:25:57	1.13	9.176	6.4
13/12/2019 00:00	05:26:07	1.144	9.295	6.5
13/12/2019 00:00	05:26:17	1.135	9.223	6.6
13/12/2019 00:00	05:26:27	1.134	9.209	6.7
13/12/2019 00:00	05:26:37	1.132	9.198	6.8
13/12/2019 00:00	05:26:47	1.135	9.216	6.9
13/12/2019 00:00	05:26:57	1.141	9.269	7
13/12/2019 00:00	05:27:07	1.131	9.186	7.1

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 POZO18



ING. JOSE SANTOS ESCAMILLA LOPEZ

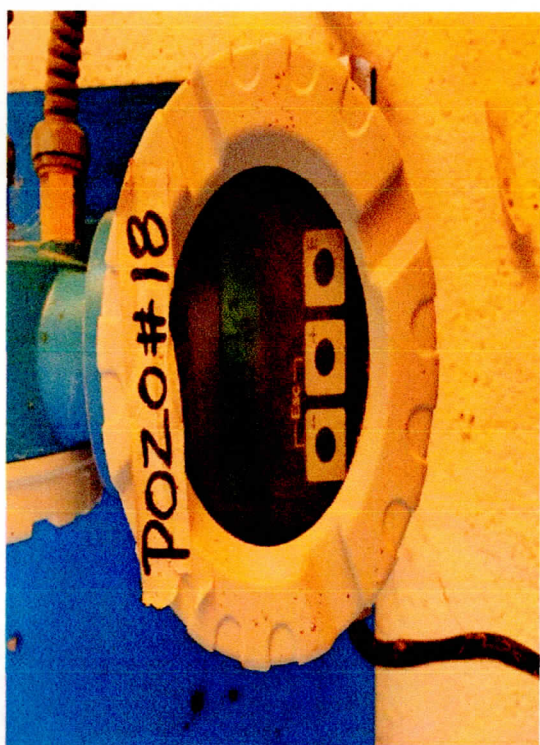
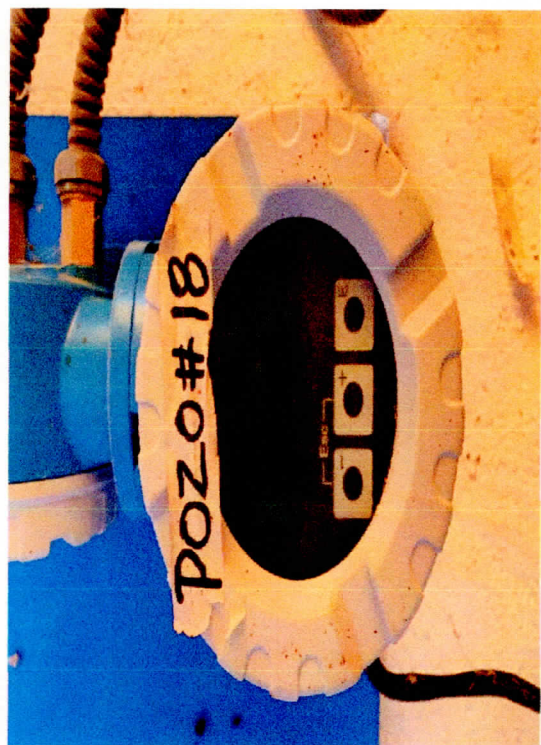
13/12/2019 00:00	05:27:17	1.129	9.171	7.2
13/12/2019 00:00	05:27:27	1.141	9.266	7.3
13/12/2019 00:00	05:27:37	1.131	9.19	7.3
13/12/2019 00:00	05:27:47	1.134	9.209	7.4
13/12/2019 00:00	05:27:57	1.14	9.26	7.5
13/12/2019 00:00	05:28:07	1.138	9.247	7.6
13/12/2019 00:00	05:28:17	1.128	9.163	7.7
13/12/2019 00:00	05:28:27	1.135	9.224	7.8
13/12/2019 00:00	05:28:37	1.132	9.198	7.9
13/12/2019 00:00	05:28:47	1.129	9.168	8
13/12/2019 00:00	05:28:57	1.13	9.178	8.1
13/12/2019 00:00	05:29:07	1.136	9.226	8.2
13/12/2019 00:00	05:29:17	1.14	9.264	8.3
13/12/2019 00:00	05:29:27	1.146	9.309	8.4
13/12/2019 00:00	05:29:37	1.146	9.305	8.5
13/12/2019 00:00	05:29:47	1.139	9.252	8.5
13/12/2019 00:00	05:29:57	1.132	9.193	8.6
13/12/2019 00:00	05:30:07	1.138	9.245	8.7
13/12/2019 00:00	05:30:17	1.128	9.163	8.8
13/12/2019 00:00	05:30:27	1.135	9.224	8.9
13/12/2019 00:00	05:30:37	1.132	9.198	9
13/12/2019 00:00	05:30:47	1.135	9.224	9.1
13/12/2019 00:00	05:30:57	1.128	9.16	9.2
13/12/2019 00:00	05:31:07	1.138	9.243	9.3
13/12/2019 00:00	05:31:17	1.145	9.301	9.4
13/12/2019 00:00	05:31:27	1.15	9.342	9.5
13/12/2019 00:00	05:31:37	1.14	9.263	9.6
13/12/2019 00:00	05:31:47	1.139	9.25	9.7
13/12/2019 00:00	05:31:57	1.153	9.362	9.7
13/12/2019 00:00	05:32:07	1.131	9.189	9.8
13/12/2019 00:00	05:32:17	1.137	9.237	9.9
13/12/2019 00:00	05:32:27	1.145	9.302	10
13/12/2019 00:00	05:32:37	1.134	9.211	10.1
13/12/2019 00:00	05:32:47	1.135	9.221	10.2
13/12/2019 00:00	05:32:57	1.141	9.266	10.3
13/12/2019 00:00	05:33:07	1.131	9.186	10.4
13/12/2019 00:00	05:33:17	1.13	9.177	10.5
13/12/2019 00:00	05:33:27	1.134	9.215	10.6
13/12/2019 00:00	05:33:37	1.145	9.302	10.7
13/12/2019 00:00	05:33:47	1.142	9.275	10.8
13/12/2019 00:00	05:33:57	1.144	9.295	10.9

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
POZO18

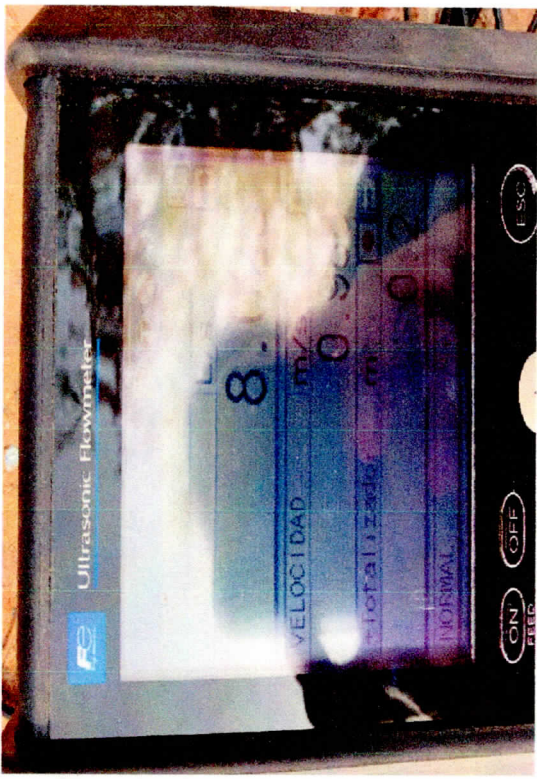


ING. JOSE SANTOS ESCAMILLA LOPEZ

13/12/2019 00:00	05:34:07	1.148	9.326	10.9
13/12/2019 00:00	05:34:17	1.144	9.29	11
13/12/2019 00:00	05:34:27	1.144	9.294	11.1
13/12/2019 00:00	05:34:37	1.145	9.3	11.2
13/12/2019 00:00	05:34:47	1.136	9.224	11.3
13/12/2019 00:00	05:34:57	1.138	9.248	11.4
13/12/2019 00:00	05:35:07	1.137	9.239	11.5
13/12/2019 00:00	05:35:17	1.143	9.285	11.6
13/12/2019 00:00	05:35:27	1.135	9.221	11.7
13/12/2019 00:00	05:35:37	1.136	9.231	11.8
13/12/2019 00:00	05:35:47	1.13	9.177	11.9
13/12/2019 00:00	05:35:57	1.127	9.153	12
13/12/2019 00:00	05:36:07	1.129	9.17	12.1
13/12/2019 00:00	05:36:17	1.135	9.22	12.1
13/12/2019 00:00	05:36:27	1.127	9.159	12.2
13/12/2019 00:00	05:36:37	1.122	9.115	12.3
13/12/2019 00:00	05:36:47	1.12	9.098	12.4
13/12/2019 00:00	05:36:57	1.133	9.202	12.5
13/12/2019 00:00	05:37:07	1.138	9.247	12.6
13/12/2019 00:00	05:37:17	1.146	9.31	12.7
13/12/2019 00:00	05:37:27	1.133	9.203	12.8
13/12/2019 00:00	05:37:37	1.121	9.109	12.9
13/12/2019 00:00	05:37:47	1.13	9.178	13
13/12/2019 00:00	05:37:57	1.123	9.123	13.1
13/12/2019 00:00	05:38:07	1.143	9.282	13.2
13/12/2019 00:00	05:38:17	1.134	9.213	13.3
13/12/2019 00:00	05:38:27	1.121	9.107	13.3
13/12/2019 00:00	05:38:37	1.117	9.072	13.4
13/12/2019 00:00	05:38:47	1.124	9.128	13.5
13/12/2019 00:00	05:38:57	1.127	9.154	13.6
13/12/2019 00:00	05:39:07	1.121	9.109	13.7
13/12/2019 00:00	05:39:17	1.117	9.075	13.8
13/12/2019 00:00	05:39:27	1.139	9.249	13.9
13/12/2019 00:00	05:39:37	1.139	9.251	14
13/12/2019 00:00	05:39:47	1.137	9.233	14.1
13/12/2019 00:00	05:39:57	1.111	9.024	14.2
13/12/2019 00:00	05:40:07	1.135	9.219	14.3
13/12/2019 00:00	05:40:17	1.125	9.141	14.3
13/12/2019 00:00	05:40:27	1.134	9.21	14.4
13/12/2019 00:00	05:40:37	1.124	9.128	14.5
13/12/2019 00:00	05:40:47	1.13	9.176	14.6





**IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
MATEHUALA TANQUE CAMINO VIEJO CHICO**



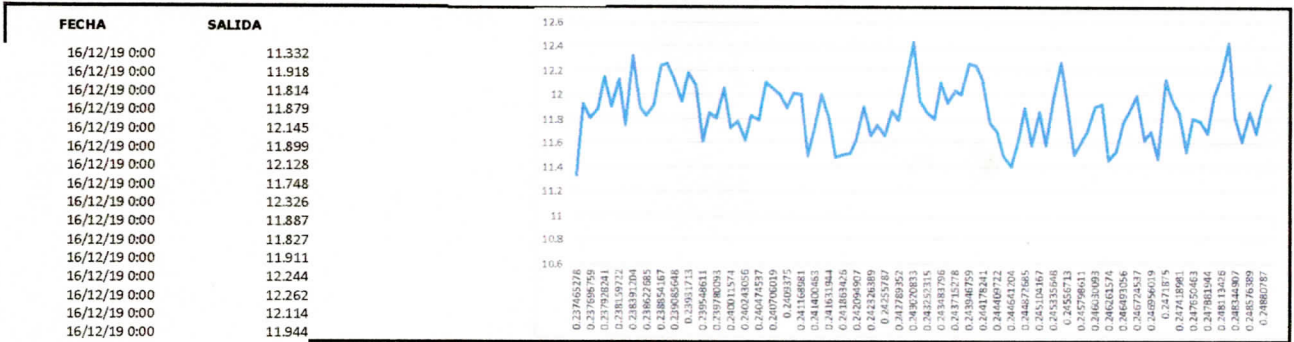
ING. JOSE SANTOS ESCAMILLA LOPEZ

FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES			
Proyecto:			
No. Sitio:	Tanque camino viejo Chico	Fuente de Abastecimiento:	
Sector:		Fecha de Inicio de Registro:	16 Dic 2019
Calle:		Fecha de fin de registro:	16 Dic 2019
Colonia:		Hora:	11:32
GPS:	Latitud	Longitud	Altitud: MSNN
	60 min		

Tiempo de Op. 60 min Estiaje: Tiempo sin Operación:

MEDIDOR			
Tipo:	Caudalimetro por ultrasonico	Modelo	Portaflow X
		No. Serie	S10A2-00Y
Caudal Puntual:	11.85 LPS	No. De Medidor Ultrasonico	S/M
		Modelo	

GRÁFICA DE CAUDAL



Fotografía del macro medidor	Fotografía del medidor ultrasonico
No cuenta con macro medidor	
Referencias del sitio de Medición:	
Observaciones:	



4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
16/12/2019 00:00	05:41:57	0.596	11.332	0.1
16/12/2019 00:00	05:42:07	0.626	11.918	0.2
16/12/2019 00:00	05:42:17	0.621	11.814	0.3
16/12/2019 00:00	05:42:27	0.624	11.879	0.5
16/12/2019 00:00	05:42:37	0.638	12.145	0.6
16/12/2019 00:00	05:42:47	0.625	11.899	0.7
16/12/2019 00:00	05:42:57	0.637	12.128	0.8
16/12/2019 00:00	05:43:07	0.617	11.748	0.9
16/12/2019 00:00	05:43:17	0.648	12.326	1.1
16/12/2019 00:00	05:43:27	0.625	11.887	1.2
16/12/2019 00:00	05:43:37	0.622	11.827	1.3
16/12/2019 00:00	05:43:47	0.626	11.911	1.4
16/12/2019 00:00	05:43:57	0.644	12.244	1.5
16/12/2019 00:00	05:44:07	0.645	12.262	1.7
16/12/2019 00:00	05:44:17	0.637	12.114	1.8
16/12/2019 00:00	05:44:27	0.628	11.944	1.9
16/12/2019 00:00	05:44:37	0.64	12.18	2
16/12/2019 00:00	05:44:47	0.635	12.078	2.1
16/12/2019 00:00	05:44:57	0.61	11.61	2.3
16/12/2019 00:00	05:45:07	0.623	11.847	2.4
16/12/2019 00:00	05:45:17	0.621	11.808	2.5
16/12/2019 00:00	05:45:27	0.633	12.052	2.6
16/12/2019 00:00	05:45:37	0.616	11.728	2.7
16/12/2019 00:00	05:45:47	0.619	11.78	2.8
16/12/2019 00:00	05:45:57	0.611	11.622	3
16/12/2019 00:00	05:46:07	0.622	11.826	3.1
16/12/2019 00:00	05:46:17	0.62	11.791	3.2
16/12/2019 00:00	05:46:27	0.637	12.11	3.3
16/12/2019 00:00	05:46:37	0.634	12.053	3.4
16/12/2019 00:00	05:46:47	0.631	12.002	3.6
16/12/2019 00:00	05:46:57	0.625	11.894	3.7
16/12/2019 00:00	05:47:07	0.632	12.02	3.8
16/12/2019 00:00	05:47:17	0.631	12.006	3.9
16/12/2019 00:00	05:47:27	0.604	11.495	4
16/12/2019 00:00	05:47:37	0.616	11.718	4.2
16/12/2019 00:00	05:47:47	0.631	12.002	4.3
16/12/2019 00:00	05:47:57	0.62	11.804	4.4

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
Cam_VChico



ING. JOSE SANTOS ESCAMILLA LOPEZ

16/12/2019 00:00	05:48:07	0.603	11.481	4.5
16/12/2019 00:00	05:48:17	0.604	11.497	4.6
16/12/2019 00:00	05:48:27	0.605	11.511	4.7
16/12/2019 00:00	05:48:37	0.611	11.623	4.9
16/12/2019 00:00	05:48:47	0.626	11.903	5
16/12/2019 00:00	05:48:57	0.613	11.664	5.1
16/12/2019 00:00	05:49:07	0.617	11.747	5.2
16/12/2019 00:00	05:49:17	0.613	11.662	5.3
16/12/2019 00:00	05:49:27	0.624	11.867	5.4
16/12/2019 00:00	05:49:37	0.619	11.786	5.6
16/12/2019 00:00	05:49:47	0.636	12.108	5.7
16/12/2019 00:00	05:49:57	0.654	12.439	5.8
16/12/2019 00:00	05:50:07	0.629	11.957	5.9
16/12/2019 00:00	05:50:17	0.624	11.863	6
16/12/2019 00:00	05:50:27	0.62	11.803	6.2
16/12/2019 00:00	05:50:37	0.636	12.108	6.3
16/12/2019 00:00	05:50:47	0.627	11.936	6.4
16/12/2019 00:00	05:50:57	0.633	12.04	6.5
16/12/2019 00:00	05:51:07	0.631	12.007	6.6
16/12/2019 00:00	05:51:17	0.644	12.26	6.8
16/12/2019 00:00	05:51:27	0.643	12.241	6.9
16/12/2019 00:00	05:51:37	0.638	12.132	7
16/12/2019 00:00	05:51:47	0.618	11.766	7.1
16/12/2019 00:00	05:51:57	0.615	11.702	7.2
16/12/2019 00:00	05:52:07	0.604	11.493	7.4
16/12/2019 00:00	05:52:17	0.6	11.412	7.5
16/12/2019 00:00	05:52:27	0.611	11.617	7.6
16/12/2019 00:00	05:52:37	0.625	11.894	7.7
16/12/2019 00:00	05:52:47	0.609	11.587	7.8
16/12/2019 00:00	05:52:57	0.623	11.858	7.9
16/12/2019 00:00	05:53:07	0.609	11.584	8.1
16/12/2019 00:00	05:53:17	0.628	11.943	8.2
16/12/2019 00:00	05:53:27	0.645	12.271	8.3
16/12/2019 00:00	05:53:37	0.63	11.979	8.4
16/12/2019 00:00	05:53:47	0.605	11.502	8.5
16/12/2019 00:00	05:53:57	0.61	11.605	8.7
16/12/2019 00:00	05:54:07	0.615	11.695	8.8
16/12/2019 00:00	05:54:17	0.625	11.899	8.9
16/12/2019 00:00	05:54:27	0.627	11.919	9
16/12/2019 00:00	05:54:37	0.603	11.465	9.1

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 Cam_VChico



ING. JOSE SANTOS ESCAMILLA LOPEZ

16/12/2019 00:00	05:54:47	0.606	11.532	9.2
16/12/2019 00:00	05:54:57	0.619	11.774	9.4
16/12/2019 00:00	05:55:07	0.624	11.868	9.5
16/12/2019 00:00	05:55:17	0.63	11.993	9.6
16/12/2019 00:00	05:55:27	0.611	11.629	9.7
16/12/2019 00:00	05:55:37	0.615	11.699	9.8
16/12/2019 00:00	05:55:47	0.603	11.472	9.9
16/12/2019 00:00	05:55:57	0.638	12.131	10.1
16/12/2019 00:00	05:56:07	0.629	11.97	10.2
16/12/2019 00:00	05:56:17	0.623	11.854	10.3
16/12/2019 00:00	05:56:27	0.606	11.532	10.4
16/12/2019 00:00	05:56:37	0.621	11.812	10.5
16/12/2019 00:00	05:56:47	0.619	11.781	10.7
16/12/2019 00:00	05:56:57	0.614	11.682	10.8
16/12/2019 00:00	05:57:07	0.63	11.993	10.9
16/12/2019 00:00	05:57:17	0.64	12.17	11
16/12/2019 00:00	05:57:27	0.654	12.434	11.1
16/12/2019 00:00	05:57:37	0.622	11.825	11.3
16/12/2019 00:00	05:57:47	0.61	11.612	11.4
16/12/2019 00:00	05:57:57	0.624	11.864	11.5
16/12/2019 00:00	05:58:07	0.614	11.682	11.6
16/12/2019 00:00	05:58:17	0.628	11.944	11.7
16/12/2019 00:00	05:58:27	0.636	12.092	11.8

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL - MATEHUALA
Tanque Camino Viejo



ING. JOSE SANTOS ESCAMILLA LOPEZ



IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL - MATEHUALA
Tanque Camino Viejo



ING. JOSE SANTOS ESCAMILLA LOPEZ



IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA MATEHUALA TANQUE CAMINO VIEJO GRANDE

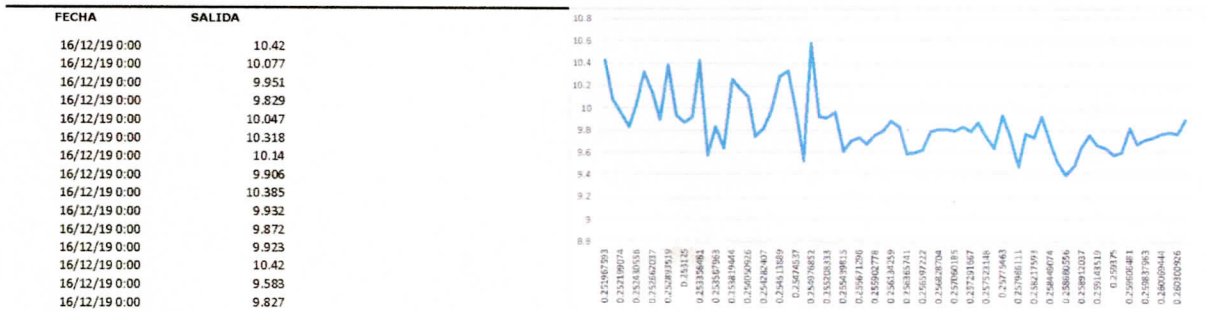


ING. JOSE SANTOS ESCAMILLA LOPEZ

FICHA TÉCNICA PARA MEDICIÓN INSTANTÁNEA DE CAUDALES			
Proyecto: Tanque camino viejo Grande			
No. Sitio:	Tanque camino viejo Grande	Fuente de Abastecimiento:	
Sector:		Fecha de inicio de Registro:	16 Dic 2019
Calle:		Fecha de fin de registro:	16 Dic 2019
Colonia:		Hora:	6:02
GPS:	Latitud	Longitud	Altitud: MSNM
60 min			

Tempo de Op.	Estiaje:	Tempo sin Operación:
MEDIDOR		
Tipo: Caudalímetro por ultrasonico	Modelo Portaflow X	No. Serie S10A2-00Y
Caudal Puntual: 9.8 LPS	No. De Medidor Ultrasonico	S/M Modelo

GRÁFICA DE CAUDAL



Fotografía del macro medidor	Fotografía del medidor ultrasonico
No cuenta con macro medidor	
Referencias del sitio de Medición:	
Observaciones:	

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
Cam_Vgde



ING. JOSE SANTOS ESCAMILLA LOPEZ

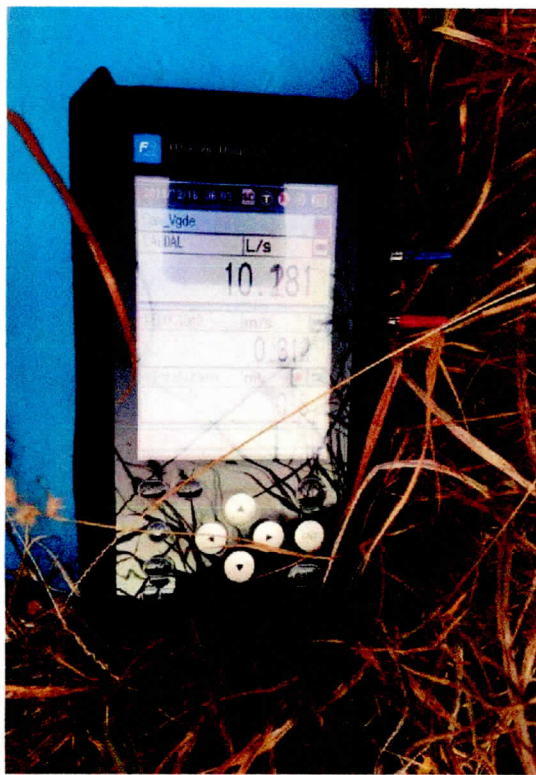
4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
16/12/2019 00:00	06:02:50	0.32	10.42	0.5
16/12/2019 00:00	06:03:00	0.309	10.077	0.6
16/12/2019 00:00	06:03:10	0.305	9.951	0.7
16/12/2019 00:00	06:03:20	0.301	9.829	0.8
16/12/2019 00:00	06:03:30	0.308	10.047	0.9
16/12/2019 00:00	06:03:40	0.316	10.318	1
16/12/2019 00:00	06:03:50	0.311	10.14	1.1
16/12/2019 00:00	06:04:00	0.304	9.906	1.2
16/12/2019 00:00	06:04:10	0.319	10.385	1.3
16/12/2019 00:00	06:04:20	0.305	9.932	1.4
16/12/2019 00:00	06:04:30	0.303	9.872	1.5
16/12/2019 00:00	06:04:40	0.304	9.923	1.6
16/12/2019 00:00	06:04:50	0.32	10.42	1.7
16/12/2019 00:00	06:05:00	0.294	9.583	1.8
16/12/2019 00:00	06:05:10	0.301	9.827	1.9
16/12/2019 00:00	06:05:20	0.296	9.639	2
16/12/2019 00:00	06:05:30	0.315	10.26	2.1
16/12/2019 00:00	06:05:40	0.312	10.173	2.2
16/12/2019 00:00	06:05:50	0.31	10.099	2.3
16/12/2019 00:00	06:06:00	0.299	9.746	2.4
16/12/2019 00:00	06:06:10	0.301	9.825	2.5
16/12/2019 00:00	06:06:20	0.306	9.973	2.6
16/12/2019 00:00	06:06:30	0.316	10.288	2.7
16/12/2019 00:00	06:06:40	0.317	10.331	2.8
16/12/2019 00:00	06:06:50	0.306	9.991	2.9
16/12/2019 00:00	06:07:00	0.292	9.533	3
16/12/2019 00:00	06:07:10	0.325	10.579	3.1
16/12/2019 00:00	06:07:20	0.304	9.926	3.2
16/12/2019 00:00	06:07:30	0.304	9.913	3.3
16/12/2019 00:00	06:07:40	0.306	9.969	3.4
16/12/2019 00:00	06:07:50	0.295	9.608	3.5
16/12/2019 00:00	06:08:00	0.298	9.708	3.6
16/12/2019 00:00	06:08:10	0.299	9.74	3.7
16/12/2019 00:00	06:08:20	0.297	9.674	3.8
16/12/2019 00:00	06:08:30	0.299	9.756	3.9
16/12/2019 00:00	06:08:40	0.3	9.785	4
16/12/2019 00:00	06:08:50	0.303	9.883	4.1

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 Cam_Vgde



ING. JOSE SANTOS ESCAMILLA LOPEZ

16/12/2019 00:00	06:09:00	0.302	9.834	4.2
16/12/2019 00:00	06:09:10	0.294	9.586	4.3
16/12/2019 00:00	06:09:20	0.294	9.598	4.4
16/12/2019 00:00	06:09:30	0.295	9.62	4.5
16/12/2019 00:00	06:09:40	0.3	9.792	4.6
16/12/2019 00:00	06:09:50	0.301	9.814	4.7
16/12/2019 00:00	06:10:00	0.301	9.805	4.8
16/12/2019 00:00	06:10:10	0.3	9.796	4.9
16/12/2019 00:00	06:10:20	0.301	9.829	5
16/12/2019 00:00	06:10:30	0.3	9.787	5.1
16/12/2019 00:00	06:10:40	0.303	9.873	5.2
16/12/2019 00:00	06:10:50	0.299	9.752	5.3
16/12/2019 00:00	06:11:00	0.296	9.639	5.4
16/12/2019 00:00	06:11:10	0.305	9.933	5.5
16/12/2019 00:00	06:11:20	0.299	9.75	5.6
16/12/2019 00:00	06:11:30	0.291	9.479	5.7
16/12/2019 00:00	06:11:40	0.3	9.765	5.8
16/12/2019 00:00	06:11:50	0.299	9.741	5.9
16/12/2019 00:00	06:12:00	0.304	9.922	6
16/12/2019 00:00	06:12:10	0.297	9.696	6.1
16/12/2019 00:00	06:12:20	0.291	9.493	6.2
16/12/2019 00:00	06:12:30	0.288	9.399	6.2
16/12/2019 00:00	06:12:40	0.291	9.484	6.3
16/12/2019 00:00	06:12:50	0.296	9.641	6.4
16/12/2019 00:00	06:13:00	0.299	9.76	6.5
16/12/2019 00:00	06:13:10	0.297	9.667	6.6
16/12/2019 00:00	06:13:20	0.296	9.643	6.7
16/12/2019 00:00	06:13:30	0.294	9.58	6.8
16/12/2019 00:00	06:13:40	0.295	9.605	6.9
16/12/2019 00:00	06:13:50	0.301	9.825	7
16/12/2019 00:00	06:14:00	0.297	9.673	7.1
16/12/2019 00:00	06:14:10	0.298	9.72	7.2
16/12/2019 00:00	06:14:20	0.299	9.735	7.3
16/12/2019 00:00	06:14:30	0.3	9.771	7.4
16/12/2019 00:00	06:14:40	0.3	9.783	7.5
16/12/2019 00:00	06:14:50	0.3	9.77	7.6
16/12/2019 00:00	06:15:00	0.303	9.889	7.7



IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL - MATEHUALA
Tanque Camino Viejo Grande



ING. JOSE SANTOS ESCAMILLA LOPEZ

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA MATEHUALA TANQUE PONCIANO



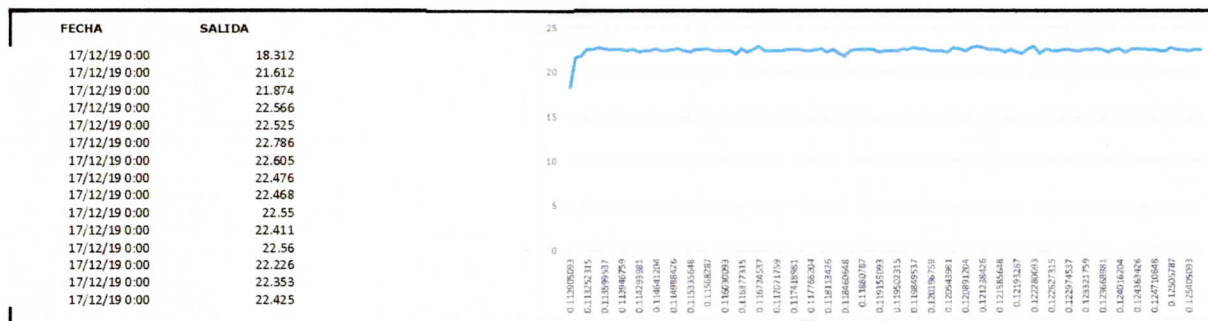
ING. JOSE SANTOS ESCAMILLA LOPEZ

FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES				
Proyecto: Ponciano				
No. Sitio:	Fuente de Abastecimiento:			
Sector:	Fecha de Inicio de Registro:			
Calle:	Fecha de fin de registro:			
Colonia:	Hora:			
GPS:	Latitud	Longitud	Altitud:	MSNM

Tiempo de Op. 60 min Estiaje: Tiempo sin Operación:

MEDIDOR				
Tipo:	Caudalmetro por ultrasonico	Modelo	Portaflow X	No. Serie S10A2-00Y
Caudal Puntual:	LPS	No. De Medidor Ultrasonico	S/M	Modelo

GRÁFICA DE CAUDAL



Fotografía del macro medidor

Fotografía del medidor ultrasonico

No cuenta con macro medidor:



Referencias del sitio de Medición:

Observaciones:

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE PONCIANO



ING. JOSE SANTOS ESCAMILLA LOPEZ

4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
17/12/2019 00:00	02:42:35	0.356	18.312	0
17/12/2019 00:00	02:42:45	0.42	21.612	0.2
17/12/2019 00:00	02:42:55	0.425	21.874	0.4
17/12/2019 00:00	02:43:05	0.439	22.566	0.7
17/12/2019 00:00	02:43:15	0.438	22.525	0.9
17/12/2019 00:00	02:43:25	0.443	22.786	1.1
17/12/2019 00:00	02:43:35	0.439	22.605	1.4
17/12/2019 00:00	02:43:45	0.437	22.476	1.6
17/12/2019 00:00	02:43:55	0.437	22.468	1.8
17/12/2019 00:00	02:44:05	0.438	22.55	2
17/12/2019 00:00	02:44:15	0.436	22.411	2.2
17/12/2019 00:00	02:44:25	0.438	22.56	2.5
17/12/2019 00:00	02:44:35	0.432	22.226	2.7
17/12/2019 00:00	02:44:45	0.434	22.353	2.9
17/12/2019 00:00	02:44:55	0.436	22.425	3.1
17/12/2019 00:00	02:45:05	0.44	22.638	3.4
17/12/2019 00:00	02:45:15	0.436	22.44	3.6
17/12/2019 00:00	02:45:25	0.436	22.419	3.8
17/12/2019 00:00	02:45:35	0.438	22.558	4
17/12/2019 00:00	02:45:45	0.441	22.696	4.3
17/12/2019 00:00	02:45:55	0.436	22.447	4.5
17/12/2019 00:00	02:46:05	0.434	22.329	4.7
17/12/2019 00:00	02:46:15	0.437	22.482	4.9
17/12/2019 00:00	02:46:25	0.437	22.468	5.2
17/12/2019 00:00	02:46:35	0.441	22.689	5.4
17/12/2019 00:00	02:46:45	0.436	22.426	5.6
17/12/2019 00:00	02:46:55	0.436	22.406	5.8
17/12/2019 00:00	02:47:05	0.436	22.422	6.1
17/12/2019 00:00	02:47:15	0.434	22.352	6.3
17/12/2019 00:00	02:47:25	0.429	22.048	6.5
17/12/2019 00:00	02:47:35	0.439	22.593	6.7
17/12/2019 00:00	02:47:45	0.433	22.261	7
17/12/2019 00:00	02:47:55	0.437	22.466	7.2
17/12/2019 00:00	02:48:05	0.445	22.886	7.4
17/12/2019 00:00	02:48:15	0.435	22.403	7.6
17/12/2019 00:00	02:48:25	0.436	22.45	7.9

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE PONCIANO



ING. JOSE SANTOS ESCAMILLA LOPEZ

17/12/2019 00:00	02:48:35	0.435	22.367	8.1
17/12/2019 00:00	02:48:45	0.436	22.45	8.3
17/12/2019 00:00	02:48:55	0.439	22.581	8.5
17/12/2019 00:00	02:49:05	0.437	22.506	8.8
17/12/2019 00:00	02:49:15	0.438	22.516	9
17/12/2019 00:00	02:49:25	0.435	22.406	9.2
17/12/2019 00:00	02:49:35	0.435	22.362	9.4
17/12/2019 00:00	02:49:45	0.437	22.488	9.7
17/12/2019 00:00	02:49:55	0.44	22.655	9.9
17/12/2019 00:00	02:50:05	0.433	22.299	10.1
17/12/2019 00:00	02:50:15	0.437	22.463	10.3
17/12/2019 00:00	02:50:25	0.43	22.101	10.6
17/12/2019 00:00	02:50:35	0.424	21.814	10.8
17/12/2019 00:00	02:50:45	0.436	22.453	11
17/12/2019 00:00	02:50:55	0.437	22.479	11.2
17/12/2019 00:00	02:51:05	0.437	22.46	11.4
17/12/2019 00:00	02:51:15	0.437	22.499	11.7
17/12/2019 00:00	02:51:25	0.438	22.543	11.9
17/12/2019 00:00	02:51:35	0.433	22.269	12.1
17/12/2019 00:00	02:51:45	0.435	22.381	12.3
17/12/2019 00:00	02:51:55	0.435	22.362	12.6
17/12/2019 00:00	02:52:05	0.435	22.359	12.8
17/12/2019 00:00	02:52:15	0.44	22.632	13
17/12/2019 00:00	02:52:25	0.438	22.527	13.2
17/12/2019 00:00	02:52:35	0.443	22.815	13.5
17/12/2019 00:00	02:52:45	0.439	22.61	13.7
17/12/2019 00:00	02:52:55	0.44	22.635	13.9
17/12/2019 00:00	02:53:05	0.436	22.435	14.1
17/12/2019 00:00	02:53:15	0.436	22.439	14.4
17/12/2019 00:00	02:53:25	0.434	22.333	14.6
17/12/2019 00:00	02:53:35	0.434	22.314	14.8
17/12/2019 00:00	02:53:45	0.443	22.811	15
17/12/2019 00:00	02:53:55	0.44	22.618	15.3
17/12/2019 00:00	02:54:05	0.435	22.378	15.5
17/12/2019 00:00	02:54:15	0.443	22.768	15.7
17/12/2019 00:00	02:54:25	0.445	22.903	15.9
17/12/2019 00:00	02:54:35	0.443	22.817	16.2
17/12/2019 00:00	02:54:45	0.437	22.493	16.4
17/12/2019 00:00	02:54:55	0.438	22.516	16.6
17/12/2019 00:00	02:55:05	0.437	22.498	16.9

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE PONCIANO



ING. JOSE SANTOS ESCAMILLA LOPEZ

17/12/2019 00:00	02:55:15	0.433	22.267	17.1
17/12/2019 00:00	02:55:25	0.439	22.568	17.3
17/12/2019 00:00	02:55:35	0.432	22.21	17.5
17/12/2019 00:00	02:55:45	0.431	22.159	17.7
17/12/2019 00:00	02:55:55	0.441	22.707	18
17/12/2019 00:00	02:56:05	0.446	22.927	18.2
17/12/2019 00:00	02:56:15	0.43	22.144	18.4
17/12/2019 00:00	02:56:25	0.439	22.595	18.7
17/12/2019 00:00	02:56:35	0.434	22.349	18.9
17/12/2019 00:00	02:56:45	0.436	22.445	19.1
17/12/2019 00:00	02:56:55	0.438	22.531	19.3
17/12/2019 00:00	02:57:05	0.439	22.575	19.5
17/12/2019 00:00	02:57:15	0.436	22.43	19.8
17/12/2019 00:00	02:57:25	0.435	22.4	20
17/12/2019 00:00	02:57:35	0.439	22.573	20.2
17/12/2019 00:00	02:57:45	0.439	22.587	20.4
17/12/2019 00:00	02:57:55	0.441	22.692	20.7
17/12/2019 00:00	02:58:05	0.439	22.576	20.9
17/12/2019 00:00	02:58:15	0.434	22.329	21.1
17/12/2019 00:00	02:58:25	0.438	22.535	21.3
17/12/2019 00:00	02:58:35	0.44	22.628	21.6
17/12/2019 00:00	02:58:45	0.432	22.203	21.8
17/12/2019 00:00	02:58:55	0.44	22.623	22
17/12/2019 00:00	02:59:05	0.441	22.67	22.3
17/12/2019 00:00	02:59:15	0.44	22.656	22.5
17/12/2019 00:00	02:59:25	0.439	22.59	22.7
17/12/2019 00:00	02:59:35	0.438	22.52	22.9
17/12/2019 00:00	02:59:45	0.436	22.419	23.1
17/12/2019 00:00	02:59:55	0.436	22.443	23.4
17/12/2019 00:00	03:00:05	0.442	22.757	23.6
17/12/2019 00:00	03:00:15	0.437	22.465	23.8
17/12/2019 00:00	03:00:25	0.439	22.58	24.1
17/12/2019 00:00	03:00:35	0.436	22.407	24.3
17/12/2019 00:00	03:00:45	0.438	22.541	24.5
17/12/2019 00:00	03:00:55	0.438	22.525	24.7

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL - MATEHUALA
Tanque Ponciano



ING. JOSE SANTOS ESCAMILLA LOPEZ

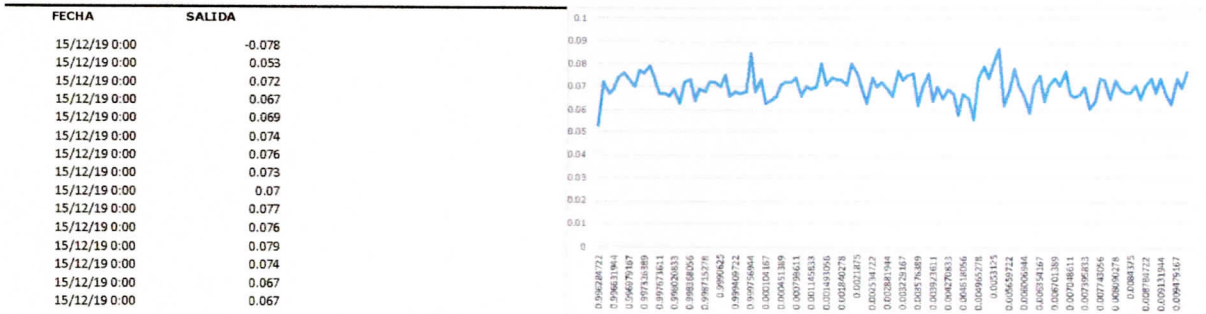


**IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
MATEHUALA TANQUE RANCHITO**

FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES			
Proyecto:			
No. Sitio:	Ranchito	Fuente de Abastecimiento:	
Sector:		Fecha de Inicio de Registro:	15 Dic 2019
Calle:		Fecha de fin de registro:	15 Dic 2019
Colonia:		Hora:	11:53
GPS:	Latitud 60 min	Longitud	Altitud: MSNM

Tiempo de Op.	Estiaje:	Tiempo sin Operación:			
MEDIDOR					
Tipo:	Caudalímetro por ultrasonico	Modelo	Portafflow X	No. Serie	S10A2-00Y
Caudal Puntual:	0.06 LPS	No. De Medidor Ultrasonico	S/M	Modelo	

GRÁFICA DE CAUDAL



Fotografía del macro medidor	Fotografía del medidor ultrasonico
Referencias del sitio de Medición:	
Observaciones:	



4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
15/12/2019 00:00	23:54:29	-0.032	-0.078	0
15/12/2019 00:00	23:54:39	0.022	0.053	0
15/12/2019 00:00	23:54:49	0.03	0.072	0
15/12/2019 00:00	23:54:59	0.028	0.067	0
15/12/2019 00:00	23:55:09	0.029	0.069	0
15/12/2019 00:00	23:55:19	0.031	0.074	0
15/12/2019 00:00	23:55:29	0.032	0.076	0
15/12/2019 00:00	23:55:39	0.031	0.073	0
15/12/2019 00:00	23:55:49	0.029	0.07	0
15/12/2019 00:00	23:55:59	0.032	0.077	0
15/12/2019 00:00	23:56:09	0.032	0.076	0
15/12/2019 00:00	23:56:19	0.033	0.079	0
15/12/2019 00:00	23:56:29	0.031	0.074	0
15/12/2019 00:00	23:56:39	0.028	0.067	0
15/12/2019 00:00	23:56:49	0.028	0.067	0
15/12/2019 00:00	23:56:59	0.027	0.066	0
15/12/2019 00:00	23:57:09	0.029	0.069	0
15/12/2019 00:00	23:57:19	0.026	0.063	0
15/12/2019 00:00	23:57:29	0.03	0.072	0
15/12/2019 00:00	23:57:39	0.031	0.073	0
15/12/2019 00:00	23:57:49	0.027	0.064	0
15/12/2019 00:00	23:57:59	0.029	0.069	0
15/12/2019 00:00	23:58:09	0.029	0.068	0
15/12/2019 00:00	23:58:19	0.03	0.072	0
15/12/2019 00:00	23:58:29	0.03	0.072	0
15/12/2019 00:00	23:58:39	0.029	0.07	0
15/12/2019 00:00	23:58:49	0.031	0.075	0
15/12/2019 00:00	23:58:59	0.028	0.066	0
15/12/2019 00:00	23:59:09	0.029	0.068	0
15/12/2019 00:00	23:59:19	0.028	0.067	0
15/12/2019 00:00	23:59:29	0.028	0.068	0
15/12/2019 00:00	23:59:39	0.035	0.085	0
15/12/2019 00:00	23:59:49	0.029	0.068	0
15/12/2019 00:00	23:59:59	0.031	0.073	0
16/12/2019 00:00	00:00:09	0.026	0.063	0
16/12/2019 00:00	00:00:19	0.027	0.064	0

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE RANCHITO



ING. JOSE SANTOS ESCAMILLA LOPEZ

16/12/2019 00:00	00:00:29	0.027	0.066	0
16/12/2019 00:00	00:00:39	0.03	0.071	0
16/12/2019 00:00	00:00:49	0.03	0.072	0
16/12/2019 00:00	00:00:59	0.03	0.072	0
16/12/2019 00:00	00:01:09	0.031	0.074	0
16/12/2019 00:00	00:01:19	0.028	0.066	0
16/12/2019 00:00	00:01:29	0.029	0.07	0
16/12/2019 00:00	00:01:39	0.029	0.069	0
16/12/2019 00:00	00:01:49	0.029	0.07	0
16/12/2019 00:00	00:01:59	0.034	0.08	0
16/12/2019 00:00	00:02:09	0.03	0.071	0
16/12/2019 00:00	00:02:19	0.031	0.074	0
16/12/2019 00:00	00:02:29	0.031	0.073	0
16/12/2019 00:00	00:02:39	0.03	0.073	0
16/12/2019 00:00	00:02:49	0.03	0.071	0
16/12/2019 00:00	00:02:59	0.033	0.08	0
16/12/2019 00:00	00:03:09	0.032	0.076	0
16/12/2019 00:00	00:03:19	0.029	0.069	0
16/12/2019 00:00	00:03:29	0.026	0.063	0
16/12/2019 00:00	00:03:39	0.031	0.074	0
16/12/2019 00:00	00:03:49	0.029	0.07	0
16/12/2019 00:00	00:03:59	0.03	0.072	0
16/12/2019 00:00	00:04:09	0.029	0.069	0
16/12/2019 00:00	00:04:19	0.028	0.066	0
16/12/2019 00:00	00:04:29	0.032	0.077	0
16/12/2019 00:00	00:04:39	0.031	0.073	0
16/12/2019 00:00	00:04:49	0.031	0.075	0
16/12/2019 00:00	00:04:59	0.032	0.076	0
16/12/2019 00:00	00:05:09	0.026	0.062	0
16/12/2019 00:00	00:05:19	0.029	0.07	0
16/12/2019 00:00	00:05:29	0.032	0.076	0
16/12/2019 00:00	00:05:39	0.027	0.064	0
16/12/2019 00:00	00:05:49	0.029	0.07	0
16/12/2019 00:00	00:05:59	0.027	0.065	0
16/12/2019 00:00	00:06:09	0.029	0.069	0
16/12/2019 00:00	00:06:19	0.028	0.067	0
16/12/2019 00:00	00:06:29	0.024	0.058	0
16/12/2019 00:00	00:06:39	0.028	0.067	0
16/12/2019 00:00	00:06:49	0.027	0.065	0
16/12/2019 00:00	00:06:59	0.023	0.056	0

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE RANCHITO



ING. JOSE SANTOS ESCAMILLA LOPEZ

16/12/2019 00:00	00:07:09	0.031	0.074	0
16/12/2019 00:00	00:07:19	0.033	0.079	0
16/12/2019 00:00	00:07:29	0.031	0.074	0
16/12/2019 00:00	00:07:39	0.034	0.08	0
16/12/2019 00:00	00:07:49	0.037	0.087	0
16/12/2019 00:00	00:07:59	0.026	0.062	0
16/12/2019 00:00	00:08:09	0.029	0.069	0
16/12/2019 00:00	00:08:19	0.033	0.078	0
16/12/2019 00:00	00:08:29	0.03	0.071	0
16/12/2019 00:00	00:08:39	0.028	0.066	0
16/12/2019 00:00	00:08:49	0.025	0.059	0
16/12/2019 00:00	00:08:59	0.03	0.071	0
16/12/2019 00:00	00:09:09	0.032	0.075	0
16/12/2019 00:00	00:09:19	0.027	0.064	0
16/12/2019 00:00	00:09:29	0.03	0.071	0
16/12/2019 00:00	00:09:39	0.031	0.074	0
16/12/2019 00:00	00:09:49	0.03	0.071	0
16/12/2019 00:00	00:09:59	0.032	0.077	0
16/12/2019 00:00	00:10:09	0.028	0.067	0
16/12/2019 00:00	00:10:19	0.028	0.066	0
16/12/2019 00:00	00:10:29	0.028	0.067	0
16/12/2019 00:00	00:10:39	0.029	0.07	0
16/12/2019 00:00	00:10:49	0.025	0.061	0
16/12/2019 00:00	00:10:59	0.027	0.064	0
16/12/2019 00:00	00:11:09	0.031	0.074	0
16/12/2019 00:00	00:11:19	0.031	0.073	0
16/12/2019 00:00	00:11:29	0.027	0.065	0
16/12/2019 00:00	00:11:39	0.031	0.073	0
16/12/2019 00:00	00:11:49	0.029	0.069	0
16/12/2019 00:00	00:11:59	0.028	0.068	0
16/12/2019 00:00	00:12:09	0.028	0.068	0
16/12/2019 00:00	00:12:19	0.03	0.071	0
16/12/2019 00:00	00:12:29	0.027	0.065	0
16/12/2019 00:00	00:12:39	0.03	0.071	0
16/12/2019 00:00	00:12:49	0.031	0.074	0
16/12/2019 00:00	00:12:59	0.028	0.068	0
16/12/2019 00:00	00:13:09	0.031	0.074	0
16/12/2019 00:00	00:13:19	0.028	0.067	0
16/12/2019 00:00	00:13:29	0.026	0.063	0
16/12/2019 00:00	00:13:39	0.031	0.074	0

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
TANQUE RANCHITO



ING. JOSE SANTOS ESCAMILLA LOPEZ

16/12/2019 00:00	00:13:49	0.029	0.07	0
16/12/2019 00:00	00:13:59	0.032	0.077	0



IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 MATEHUALA TANQUE RIVAS CHICO

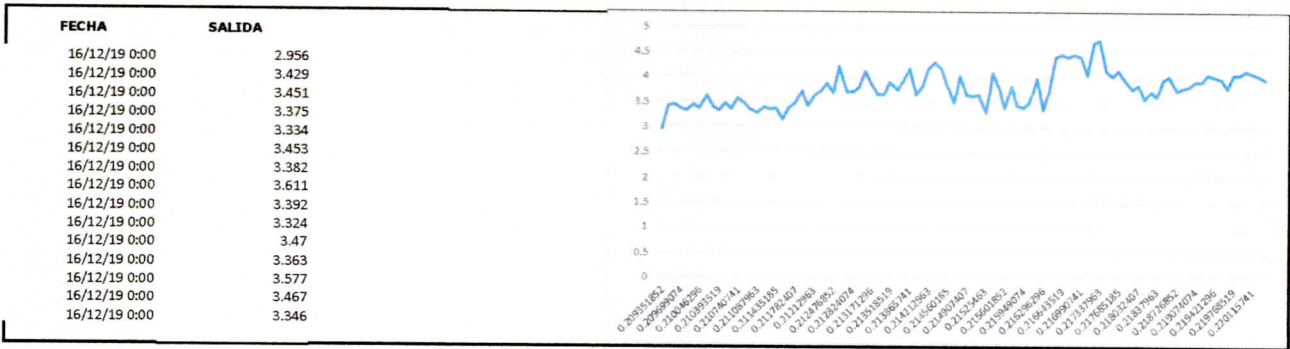


FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES

No. Sitio:	Tanque Rivas Chico	Fuente de Abastecimiento:	
Sector:		Fecha de Inicio de Registro:	16 Dic 2019
Calle:		Fecha de fin de registro:	16 Dic 2019
Colonia:		Hora:	5:01
GPS:	Latitud 60 min	Longitud	Altitud: MSNM

Tiempo de Op.	Estiaje:	MEDIDOR		Tiempo sin Operación:
		Tipo:	Modelo	No. Serie
		Caudalimetro por ultrasonico	Portaflow X	S10A2-00Y
Caudal Puntual:	3.77 LPS	No. De Medidor Ultrasonico	S/M	Modelo

GRÁFICA DE CAUDAL



Fotografía del macro medidor	Fotografía del medidor ultrasonico
No cuenta con macro medidor	
Referencias del sitio de Medición:	
Observaciones:	

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE RIVAS CHICO



ING. JOSE SANTOS ESCAMILLA LOPEZ

4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
16/12/2019 00:00	05:01:28	0.153	2.956	0
16/12/2019 00:00	05:01:38	0.178	3.429	0.1
16/12/2019 00:00	05:01:48	0.179	3.451	0.1
16/12/2019 00:00	05:01:58	0.175	3.375	0.1
16/12/2019 00:00	05:02:08	0.173	3.334	0.2
16/12/2019 00:00	05:02:18	0.179	3.453	0.2
16/12/2019 00:00	05:02:28	0.175	3.382	0.2
16/12/2019 00:00	05:02:38	0.187	3.611	0.3
16/12/2019 00:00	05:02:48	0.176	3.392	0.3
16/12/2019 00:00	05:02:58	0.172	3.324	0.3
16/12/2019 00:00	05:03:08	0.18	3.47	0.4
16/12/2019 00:00	05:03:18	0.174	3.363	0.4
16/12/2019 00:00	05:03:28	0.185	3.577	0.4
16/12/2019 00:00	05:03:38	0.18	3.467	0.5
16/12/2019 00:00	05:03:48	0.173	3.346	0.5
16/12/2019 00:00	05:03:58	0.17	3.28	0.5
16/12/2019 00:00	05:04:08	0.176	3.402	0.6
16/12/2019 00:00	05:04:18	0.174	3.36	0.6
16/12/2019 00:00	05:04:28	0.174	3.364	0.6
16/12/2019 00:00	05:04:38	0.163	3.145	0.7
16/12/2019 00:00	05:04:48	0.175	3.382	0.7
16/12/2019 00:00	05:04:58	0.18	3.481	0.7
16/12/2019 00:00	05:05:08	0.193	3.729	0.8
16/12/2019 00:00	05:05:18	0.178	3.429	0.8
16/12/2019 00:00	05:05:28	0.187	3.613	0.9
16/12/2019 00:00	05:05:38	0.193	3.725	0.9
16/12/2019 00:00	05:05:48	0.201	3.869	0.9
16/12/2019 00:00	05:05:58	0.19	3.673	1
16/12/2019 00:00	05:06:08	0.218	4.206	1
16/12/2019 00:00	05:06:18	0.192	3.707	1
16/12/2019 00:00	05:06:28	0.192	3.704	1.1
16/12/2019 00:00	05:06:38	0.197	3.793	1.1
16/12/2019 00:00	05:06:48	0.213	4.103	1.2
16/12/2019 00:00	05:06:58	0.201	3.866	1.2
16/12/2019 00:00	05:07:08	0.189	3.643	1.2
16/12/2019 00:00	05:07:18	0.189	3.65	1.3

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE RIVAS CHICO



ING. JOSE SANTOS ESCAMILLA LOPEZ

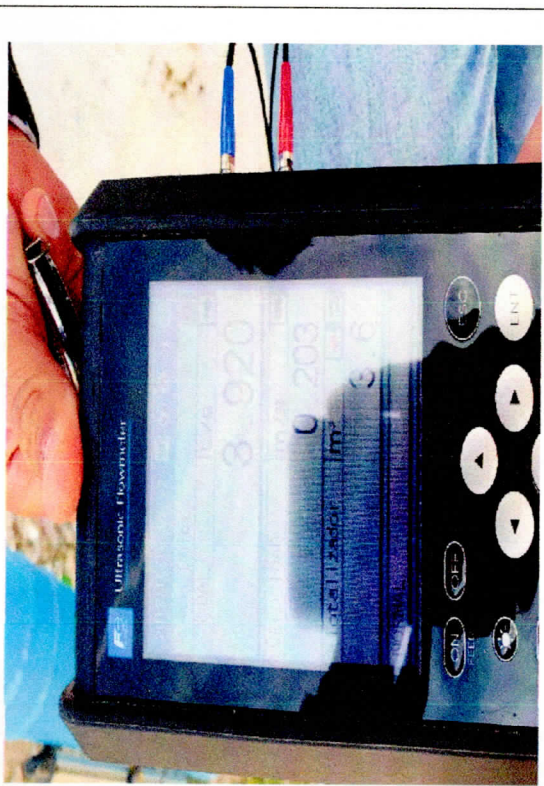
16/12/2019 00:00	05:07:28	0.202	3.898	1.3
16/12/2019 00:00	05:07:38	0.195	3.753	1.3
16/12/2019 00:00	05:07:48	0.205	3.951	1.4
16/12/2019 00:00	05:07:58	0.216	4.172	1.4
16/12/2019 00:00	05:08:08	0.189	3.649	1.5
16/12/2019 00:00	05:08:18	0.198	3.827	1.5
16/12/2019 00:00	05:08:28	0.216	4.168	1.5
16/12/2019 00:00	05:08:38	0.223	4.298	1.6
16/12/2019 00:00	05:08:48	0.215	4.152	1.6
16/12/2019 00:00	05:08:58	0.197	3.801	1.7
16/12/2019 00:00	05:09:08	0.181	3.493	1.7
16/12/2019 00:00	05:09:18	0.208	4.009	1.7
16/12/2019 00:00	05:09:28	0.189	3.651	1.8
16/12/2019 00:00	05:09:38	0.188	3.626	1.8
16/12/2019 00:00	05:09:48	0.189	3.646	1.9
16/12/2019 00:00	05:09:58	0.171	3.3	1.9
16/12/2019 00:00	05:10:08	0.212	4.085	1.9
16/12/2019 00:00	05:10:18	0.198	3.809	2
16/12/2019 00:00	05:10:28	0.177	3.411	2
16/12/2019 00:00	05:10:38	0.198	3.814	2
16/12/2019 00:00	05:10:48	0.179	3.458	2.1
16/12/2019 00:00	05:10:58	0.176	3.403	2.1
16/12/2019 00:00	05:11:08	0.182	3.51	2.1
16/12/2019 00:00	05:11:18	0.205	3.961	2.2
16/12/2019 00:00	05:11:28	0.174	3.361	2.2
16/12/2019 00:00	05:11:38	0.194	3.736	2.3
16/12/2019 00:00	05:11:48	0.229	4.419	2.3
16/12/2019 00:00	05:11:58	0.231	4.449	2.3
16/12/2019 00:00	05:12:08	0.229	4.42	2.4
16/12/2019 00:00	05:12:18	0.232	4.47	2.4
16/12/2019 00:00	05:12:28	0.229	4.416	2.5
16/12/2019 00:00	05:12:38	0.209	4.034	2.5
16/12/2019 00:00	05:12:48	0.243	4.681	2.6
16/12/2019 00:00	05:12:58	0.246	4.736	2.6
16/12/2019 00:00	05:13:08	0.215	4.143	2.7
16/12/2019 00:00	05:13:18	0.208	4.02	2.7
16/12/2019 00:00	05:13:28	0.214	4.127	2.7
16/12/2019 00:00	05:13:38	0.203	3.91	2.8
16/12/2019 00:00	05:13:48	0.195	3.76	2.8
16/12/2019 00:00	05:13:58	0.2	3.849	2.9

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
TANQUE RIVAS CHICO



ING. JOSE SANTOS ESCAMILLA LOPEZ

16/12/2019 00:00	05:14:08	0.186	3.584	2.9
16/12/2019 00:00	05:14:18	0.192	3.712	2.9
16/12/2019 00:00	05:14:28	0.187	3.616	3
16/12/2019 00:00	05:14:38	0.204	3.932	3
16/12/2019 00:00	05:14:48	0.208	4.01	3
16/12/2019 00:00	05:14:58	0.194	3.743	3.1
16/12/2019 00:00	05:15:08	0.197	3.795	3.1
16/12/2019 00:00	05:15:18	0.199	3.828	3.2
16/12/2019 00:00	05:15:28	0.203	3.905	3.2
16/12/2019 00:00	05:15:38	0.204	3.928	3.2
16/12/2019 00:00	05:15:48	0.211	4.061	3.3
16/12/2019 00:00	05:15:58	0.208	4.004	3.3
16/12/2019 00:00	05:16:08	0.205	3.956	3.4
16/12/2019 00:00	05:16:18	0.197	3.805	3.4
16/12/2019 00:00	05:16:28	0.21	4.056	3.4
16/12/2019 00:00	05:16:38	0.211	4.068	3.5
16/12/2019 00:00	05:16:48	0.214	4.128	3.5
16/12/2019 00:00	05:16:58	0.212	4.081	3.6
16/12/2019 00:00	05:17:08	0.21	4.042	3.6
16/12/2019 00:00	05:17:18	0.206	3.962	3.6



IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA MATEHUALA TANQUE RIVAS GRANDE

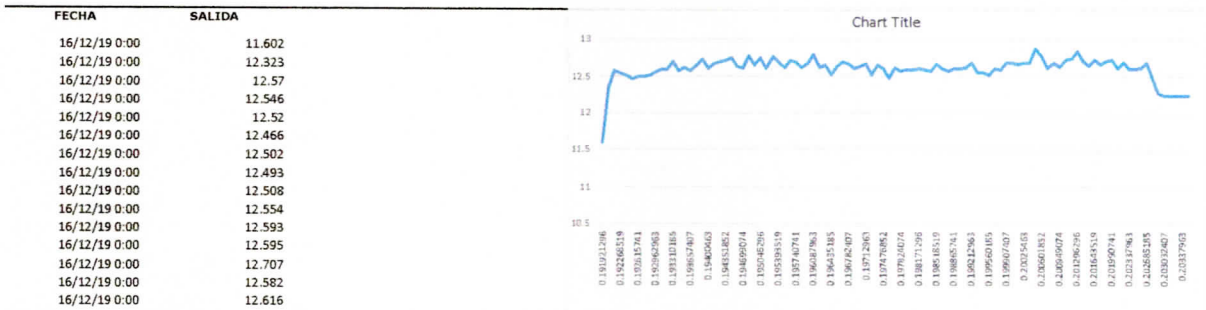


ING. JOSE SANTOS ESCAMILLA LOPEZ

FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES			
Proyecto:			
No. Sitio:	Tanque Rivas Grande	Fuente de Abastecimiento:	
Sector:		Fecha de inicio de Registro:	16 Dic 2019
Calle:		Fecha de fin de registro:	16 Dic 2019
Colonia:		Hora:	4:36
GPS:	Latitud	Longitud	Altitud: MSNM
	60 min		

Tempo de Op.	Estiaje:	Tempo sin Operación:			
MEDIDOR					
Tipo:	Caudalmetro por ultrasonico	Modelo	Portaflow X	No. Serie	S10A2-00Y
Caudal Puntual:	12.6 LPS	No. De Medidor Ultrasonico	S/M	Modelo	

GRÁFICA DE CAUDAL



Fotografía del macro medidor	Fotografía del medidor ultrasonico
No cuenta con macro medidor	
Referencias del sitio de Medición:	
Observaciones:	

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE RIVAS GRANDE



ING. JOSE SANTOS ESCAMILLA LOPEZ

4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
16/12/2019 00:00	04:36:22	0.601	11.602	0.1
16/12/2019 00:00	04:36:32	0.639	12.323	0
16/12/2019 00:00	04:36:42	0.651	12.57	0.1
16/12/2019 00:00	04:36:52	0.65	12.546	0.3
16/12/2019 00:00	04:37:02	0.649	12.52	0.4
16/12/2019 00:00	04:37:12	0.646	12.466	0.5
16/12/2019 00:00	04:37:22	0.648	12.502	0.6
16/12/2019 00:00	04:37:32	0.647	12.493	0.8
16/12/2019 00:00	04:37:42	0.648	12.508	0.9
16/12/2019 00:00	04:37:52	0.65	12.554	1
16/12/2019 00:00	04:38:02	0.653	12.593	1.1
16/12/2019 00:00	04:38:12	0.653	12.595	1.3
16/12/2019 00:00	04:38:22	0.658	12.707	1.4
16/12/2019 00:00	04:38:32	0.652	12.582	1.5
16/12/2019 00:00	04:38:42	0.654	12.616	1.6
16/12/2019 00:00	04:38:52	0.651	12.571	1.8
16/12/2019 00:00	04:39:02	0.656	12.657	1.9
16/12/2019 00:00	04:39:12	0.66	12.732	2
16/12/2019 00:00	04:39:22	0.653	12.601	2.1
16/12/2019 00:00	04:39:32	0.656	12.663	2.3
16/12/2019 00:00	04:39:42	0.659	12.71	2.4
16/12/2019 00:00	04:39:52	0.659	12.717	2.5
16/12/2019 00:00	04:40:02	0.66	12.742	2.7
16/12/2019 00:00	04:40:12	0.655	12.642	2.8
16/12/2019 00:00	04:40:22	0.653	12.611	2.9
16/12/2019 00:00	04:40:32	0.662	12.775	3
16/12/2019 00:00	04:40:42	0.656	12.656	3.2
16/12/2019 00:00	04:40:52	0.66	12.745	3.3
16/12/2019 00:00	04:41:02	0.654	12.615	3.4
16/12/2019 00:00	04:41:12	0.661	12.758	3.5
16/12/2019 00:00	04:41:22	0.658	12.69	3.7
16/12/2019 00:00	04:41:32	0.654	12.618	3.8
16/12/2019 00:00	04:41:42	0.659	12.719	3.9
16/12/2019 00:00	04:41:52	0.657	12.683	4.1
16/12/2019 00:00	04:42:02	0.654	12.629	4.2
16/12/2019 00:00	04:42:12	0.657	12.674	4.3
16/12/2019 00:00	04:42:22	0.663	12.797	4.4

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE RIVAS GRANDE



ING. JOSE SANTOS ESCAMILLA LOPEZ

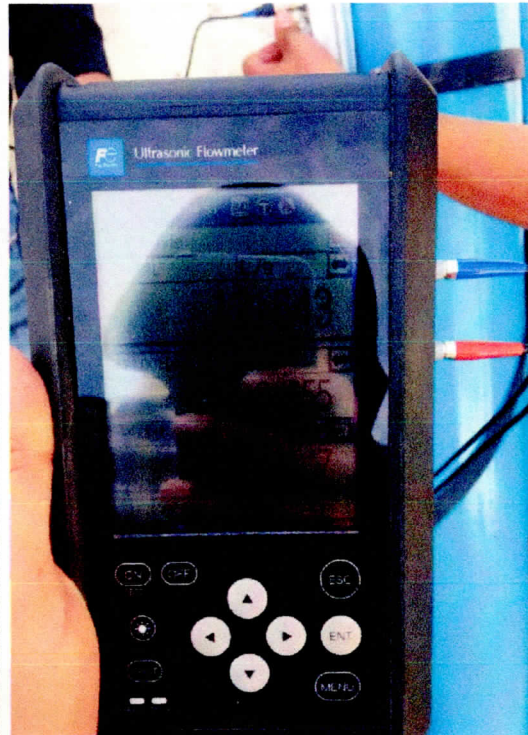
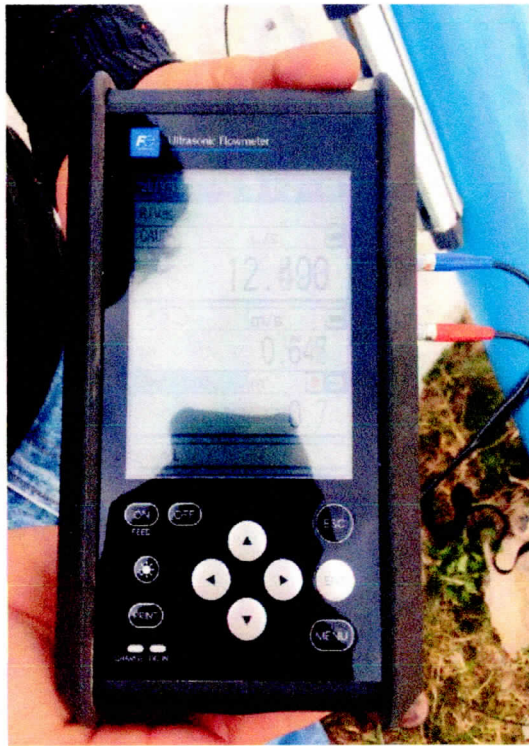
16/12/2019 00:00	04:42:32	0.654	12.63	4.6
16/12/2019 00:00	04:42:42	0.656	12.66	4.7
16/12/2019 00:00	04:42:52	0.649	12.523	4.8
16/12/2019 00:00	04:43:02	0.655	12.637	4.9
16/12/2019 00:00	04:43:12	0.659	12.71	5.1
16/12/2019 00:00	04:43:22	0.656	12.664	5.2
16/12/2019 00:00	04:43:32	0.653	12.61	5.3
16/12/2019 00:00	04:43:42	0.655	12.647	5.4
16/12/2019 00:00	04:43:52	0.657	12.677	5.6
16/12/2019 00:00	04:44:02	0.649	12.532	5.7
16/12/2019 00:00	04:44:12	0.656	12.662	5.8
16/12/2019 00:00	04:44:22	0.653	12.6	5.9
16/12/2019 00:00	04:44:32	0.647	12.48	6.1
16/12/2019 00:00	04:44:42	0.654	12.625	6.2
16/12/2019 00:00	04:44:52	0.652	12.578	6.3
16/12/2019 00:00	04:45:02	0.653	12.594	6.4
16/12/2019 00:00	04:45:12	0.653	12.597	6.6
16/12/2019 00:00	04:45:22	0.653	12.606	6.7
16/12/2019 00:00	04:45:32	0.652	12.591	6.8
16/12/2019 00:00	04:45:42	0.651	12.569	7
16/12/2019 00:00	04:45:52	0.657	12.671	7.1
16/12/2019 00:00	04:46:02	0.653	12.61	7.2
16/12/2019 00:00	04:46:12	0.652	12.583	7.3
16/12/2019 00:00	04:46:22	0.653	12.605	7.5
16/12/2019 00:00	04:46:32	0.653	12.608	7.6
16/12/2019 00:00	04:46:42	0.654	12.628	7.7
16/12/2019 00:00	04:46:52	0.657	12.681	7.8
16/12/2019 00:00	04:47:02	0.651	12.568	8
16/12/2019 00:00	04:47:12	0.651	12.562	8.1
16/12/2019 00:00	04:47:22	0.649	12.523	8.2
16/12/2019 00:00	04:47:32	0.653	12.611	8.3
16/12/2019 00:00	04:47:42	0.653	12.596	8.5
16/12/2019 00:00	04:47:52	0.658	12.691	8.6
16/12/2019 00:00	04:48:02	0.657	12.682	8.7
16/12/2019 00:00	04:48:12	0.657	12.674	8.8
16/12/2019 00:00	04:48:22	0.657	12.689	9
16/12/2019 00:00	04:48:32	0.657	12.685	9.1
16/12/2019 00:00	04:48:42	0.668	12.883	9.2
16/12/2019 00:00	04:48:52	0.663	12.794	9.4
16/12/2019 00:00	04:49:02	0.654	12.624	9.5

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE RIVAS GRANDE



ING. JOSE SANTOS ESCAMILLA LOPEZ

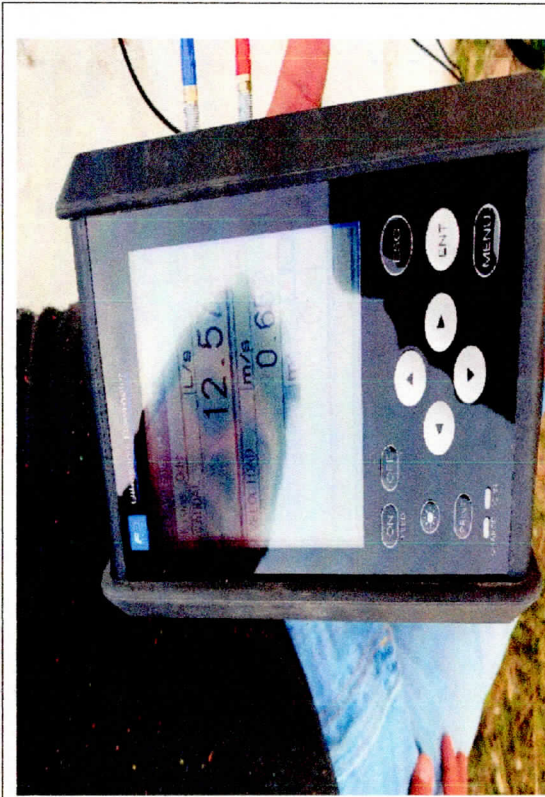
16/12/2019 00:00	04:49:12	0.657	12.689	9.6
16/12/2019 00:00	04:49:22	0.655	12.639	9.7
16/12/2019 00:00	04:49:32	0.659	12.727	9.9
16/12/2019 00:00	04:49:42	0.661	12.75	10
16/12/2019 00:00	04:49:52	0.666	12.844	10.1
16/12/2019 00:00	04:50:02	0.659	12.715	10.2
16/12/2019 00:00	04:50:12	0.656	12.661	10.4
16/12/2019 00:00	04:50:22	0.66	12.733	10.5
16/12/2019 00:00	04:50:32	0.656	12.669	10.6
16/12/2019 00:00	04:50:42	0.659	12.72	10.8
16/12/2019 00:00	04:50:52	0.659	12.726	10.9
16/12/2019 00:00	04:51:02	0.654	12.617	11
16/12/2019 00:00	04:51:12	0.659	12.71	11.1
16/12/2019 00:00	04:51:22	0.653	12.602	11.3
16/12/2019 00:00	04:51:32	0.654	12.615	11.4
16/12/2019 00:00	04:51:42	0.654	12.618	11.5
16/12/2019 00:00	04:51:52	0.658	12.693	11.6
16/12/2019 00:00	04:52:02	0.647	12.488	11.8
16/12/2019 00:00	04:52:12	0.636	12.273	11.9
16/12/2019 00:00	04:52:22	0.634	12.245	11.9
16/12/2019 00:00	04:52:32	0.634	12.242	11.9
16/12/2019 00:00	04:52:42	0.634	12.241	11.9
16/12/2019 00:00	04:52:52	0.634	12.241	11.9
16/12/2019 00:00	04:53:02	0.634	12.241	11.9



IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL - MATEHUALA
Tanque Rivas Grande



ING. JOSE SANTOS ESCAMILLA LOPEZ



**IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
MATEHUALA TANQUE TROJE**



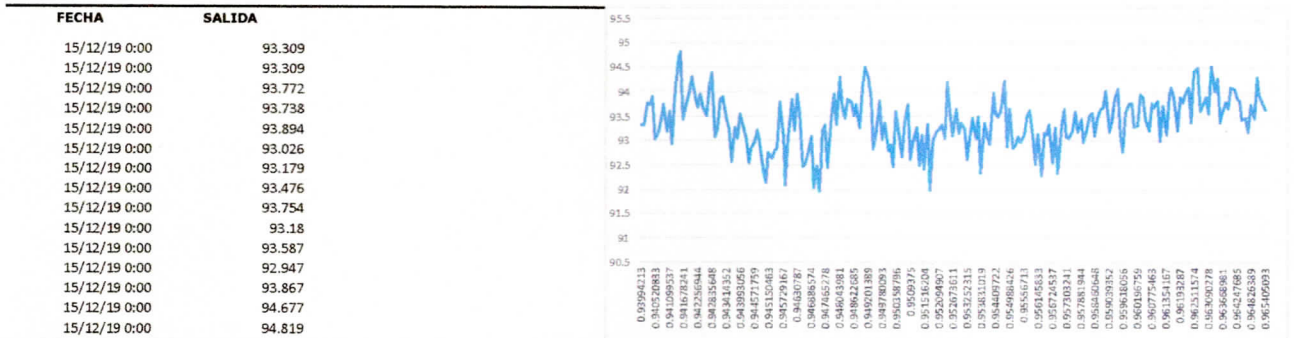
ING. JOSE SANTOS ESCAMILLA LOPEZ

FICHA TÉCNICA PARA MEDICIÓN INSTANTANEA DE CAUDALES			
Proyecto:			
No. Sitio:	Trojes	Fuente de Abastecimiento:	
Sector:		Fecha de Inicio de Registro:	12 Dic 2019
Calle:		Fecha de fin de registro:	12 Dic 2019
Colonia:		Hora:	10:33
GPS:	Latitud	Longitud	Altitud: MSNM

Tiempo de Op. 60 min Estiaje: Tiempo sin Operación:

MEDIDOR			
Tipo:	Caudalimetro por ultrasonico	Modelo	Portaflow X
		No. Serie	510A2-00Y
Caudal Puntual:	97.56 LPS	No. De Medidor Ultrasonico	S/M Modelo

GRÁFICA DE CAUDAL



Fotografía del macro medidor	Fotografía del medidor ultrasonico
Referencias del sitio de Medición:	
Observaciones:	

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE TROJES



ING. JOSE SANTOS ESCAMILLA LOPEZ

4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
15/12/2019 00:00	22:31:21	1.272	168.495	220.4
15/12/2019 00:00	22:31:31	1.272	168.547	0
15/12/2019 00:00	22:31:41	1.272	168.553	0
15/12/2019 00:00	22:31:51	1.272	168.554	0
15/12/2019 00:00	22:32:01	1.272	168.554	0
15/12/2019 00:00	22:32:11	1.272	168.554	0
15/12/2019 00:00	22:32:21	1.272	168.554	0
15/12/2019 00:00	22:32:31	1.272	168.554	0
15/12/2019 00:00	22:32:41	1.272	168.554	0
15/12/2019 00:00	22:32:51	1.272	168.554	0
15/12/2019 00:00	22:33:01	1.272	168.554	0
15/12/2019 00:00	22:33:11	1.272	168.554	0
15/12/2019 00:00	22:33:21	1.272	168.554	0
15/12/2019 00:00	22:33:31	1.272	93.309	0
15/12/2019 00:00	22:33:41	1.272	93.309	0
15/12/2019 00:00	22:33:51	1.279	93.772	0.4
15/12/2019 00:00	22:34:01	1.278	93.738	1.3
15/12/2019 00:00	22:34:11	1.28	93.894	2.2
15/12/2019 00:00	22:34:21	1.269	93.026	3.2
15/12/2019 00:00	22:34:31	1.271	93.179	4.1
15/12/2019 00:00	22:34:41	1.275	93.476	5
15/12/2019 00:00	22:34:51	1.279	93.754	6
15/12/2019 00:00	22:35:01	1.271	93.18	6.9
15/12/2019 00:00	22:35:11	1.276	93.587	7.8
15/12/2019 00:00	22:35:21	1.268	92.947	8.8
15/12/2019 00:00	22:35:31	1.28	93.867	9.7
15/12/2019 00:00	22:35:41	1.291	94.677	10.6
15/12/2019 00:00	22:35:51	1.293	94.819	11.6
15/12/2019 00:00	22:36:01	1.274	93.44	12.5
15/12/2019 00:00	22:36:11	1.279	93.801	13.5
15/12/2019 00:00	22:36:21	1.282	94.013	14.4
15/12/2019 00:00	22:36:31	1.286	94.318	15.4
15/12/2019 00:00	22:36:41	1.28	93.847	16.3
15/12/2019 00:00	22:36:51	1.286	93.708	17.2
15/12/2019 00:00	22:37:01	1.29	93.945	17.9
15/12/2019 00:00	22:37:11	1.286	93.696	18.5

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE TROJES



ING. JOSE SANTOS ESCAMILLA LOPEZ

15/12/2019 00:00	22:37:21	1.284	93.519	19.4
15/12/2019 00:00	22:37:31	1.292	94.111	20.3
15/12/2019 00:00	22:37:41	1.296	94.387	21.3
15/12/2019 00:00	22:37:51	1.278	93.099	22.2
15/12/2019 00:00	22:38:01	1.28	93.249	23.2
15/12/2019 00:00	22:38:11	1.288	93.855	24.1
15/12/2019 00:00	22:38:21	1.289	93.893	25
15/12/2019 00:00	22:38:31	1.283	93.454	25.9
15/12/2019 00:00	22:38:41	1.28	93.231	26.9
15/12/2019 00:00	22:38:51	1.271	92.582	27.9
15/12/2019 00:00	22:39:01	1.28	93.272	28.8
15/12/2019 00:00	22:39:11	1.277	93.051	29.7
15/12/2019 00:00	22:39:21	1.284	93.537	30.6
15/12/2019 00:00	22:39:31	1.28	93.242	31.6
15/12/2019 00:00	22:39:41	1.277	93.025	32.5
15/12/2019 00:00	22:39:51	1.271	92.557	33.4
15/12/2019 00:00	22:40:01	1.274	92.828	34.3
15/12/2019 00:00	22:40:11	1.276	92.978	35.3
15/12/2019 00:00	22:40:21	1.28	93.222	36.2
15/12/2019 00:00	22:40:31	1.276	92.948	37.1
15/12/2019 00:00	22:40:41	1.268	92.365	38.1
15/12/2019 00:00	22:40:51	1.265	92.154	39
15/12/2019 00:00	22:41:01	1.273	92.768	39.9
15/12/2019 00:00	22:41:11	1.272	92.662	40.8
15/12/2019 00:00	22:41:21	1.274	92.779	41.8
15/12/2019 00:00	22:41:31	1.275	92.861	42.7
15/12/2019 00:00	22:41:41	1.288	93.81	43.6
15/12/2019 00:00	22:41:51	1.278	93.09	44.6
15/12/2019 00:00	22:42:01	1.264	92.087	45.5
15/12/2019 00:00	22:42:11	1.278	93.075	46.4
15/12/2019 00:00	22:42:21	1.288	93.838	47.3
15/12/2019 00:00	22:42:31	1.28	93.225	48.3
15/12/2019 00:00	22:42:41	1.29	93.962	49.2
15/12/2019 00:00	22:42:51	1.284	93.575	50.1
15/12/2019 00:00	22:43:01	1.27	92.486	51.1
15/12/2019 00:00	22:43:11	1.27	92.541	52
15/12/2019 00:00	22:43:21	1.273	92.715	52.9
15/12/2019 00:00	22:43:31	1.278	93.094	53.8
15/12/2019 00:00	22:43:41	1.264	92.054	54.8
15/12/2019 00:00	22:43:51	1.269	92.468	55.7

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE TROJES



ING. JOSE SANTOS ESCAMILLA LOPEZ

15/12/2019 00:00	22:44:01	1.262	91.963	56.6
15/12/2019 00:00	22:44:11	1.28	93.226	57.6
15/12/2019 00:00	22:44:21	1.281	93.31	58.5
15/12/2019 00:00	22:44:31	1.269	92.464	59.4
15/12/2019 00:00	22:44:41	1.283	93.495	60.3
15/12/2019 00:00	22:44:51	1.29	93.953	61.3
15/12/2019 00:00	22:45:01	1.281	93.343	62.2
15/12/2019 00:00	22:45:11	1.294	94.295	63.1
15/12/2019 00:00	22:45:21	1.286	93.684	64.1
15/12/2019 00:00	22:45:31	1.283	93.48	65
15/12/2019 00:00	22:45:41	1.288	93.848	66
15/12/2019 00:00	22:45:51	1.288	93.797	66.9
15/12/2019 00:00	22:46:01	1.284	93.524	67.9
15/12/2019 00:00	22:46:11	1.287	93.753	68.8
15/12/2019 00:00	22:46:21	1.28	93.278	69.7
15/12/2019 00:00	22:46:31	1.291	94.06	70.6
15/12/2019 00:00	22:46:41	1.297	94.502	71.6
15/12/2019 00:00	22:46:51	1.294	94.267	72.6
15/12/2019 00:00	22:47:01	1.288	93.838	73.5
15/12/2019 00:00	22:47:11	1.274	92.846	74.4
15/12/2019 00:00	22:47:21	1.278	93.121	75.3
15/12/2019 00:00	22:47:31	1.288	93.818	76.3
15/12/2019 00:00	22:47:41	1.277	93.044	77.2
15/12/2019 00:00	22:47:51	1.282	93.375	78.1
15/12/2019 00:00	22:48:01	1.274	92.818	79.1
15/12/2019 00:00	22:48:11	1.275	92.91	80
15/12/2019 00:00	22:48:21	1.269	92.478	81
15/12/2019 00:00	22:48:31	1.285	93.608	81.9
15/12/2019 00:00	22:48:41	1.277	93.052	82.8
15/12/2019 00:00	22:48:51	1.272	92.677	83.7
15/12/2019 00:00	22:49:01	1.282	93.4	84.7
15/12/2019 00:00	22:49:11	1.287	93.76	85.6
15/12/2019 00:00	22:49:21	1.272	92.63	86.5
15/12/2019 00:00	22:49:31	1.276	92.984	87.5
15/12/2019 00:00	22:49:41	1.28	93.261	88.4
15/12/2019 00:00	22:49:51	1.27	92.514	89.3
15/12/2019 00:00	22:50:01	1.278	93.116	90.2
15/12/2019 00:00	22:50:11	1.269	92.435	91.2
15/12/2019 00:00	22:50:21	1.281	93.336	92.1
15/12/2019 00:00	22:50:31	1.263	92.006	93

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
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ING. JOSE SANTOS ESCAMILLA LOPEZ

15/12/2019 00:00	22:50:41	1.277	93.01	94
15/12/2019 00:00	22:50:51	1.279	93.193	94.9
15/12/2019 00:00	22:51:01	1.28	93.232	95.8
15/12/2019 00:00	22:51:11	1.281	93.323	96.7
15/12/2019 00:00	22:51:21	1.278	93.067	97.7
15/12/2019 00:00	22:51:31	1.293	94.207	98.6
15/12/2019 00:00	22:51:41	1.285	93.597	99.6
15/12/2019 00:00	22:51:51	1.278	93.102	100.5
15/12/2019 00:00	22:52:01	1.285	93.641	101.4
15/12/2019 00:00	22:52:11	1.279	93.166	102.4
15/12/2019 00:00	22:52:21	1.282	93.363	103.3
15/12/2019 00:00	22:52:31	1.28	93.241	104.2
15/12/2019 00:00	22:52:41	1.272	92.639	105.1
15/12/2019 00:00	22:52:51	1.277	93.062	106.1
15/12/2019 00:00	22:53:01	1.283	93.481	107
15/12/2019 00:00	22:53:11	1.277	93.053	107.9
15/12/2019 00:00	22:53:21	1.283	93.487	108.9
15/12/2019 00:00	22:53:31	1.268	92.34	109.8
15/12/2019 00:00	22:53:41	1.282	93.367	110.8
15/12/2019 00:00	22:53:51	1.278	93.089	111.7
15/12/2019 00:00	22:54:01	1.276	92.945	112.6
15/12/2019 00:00	22:54:11	1.29	93.964	113.5
15/12/2019 00:00	22:54:21	1.285	93.577	114.5
15/12/2019 00:00	22:54:31	1.283	93.496	115.4
15/12/2019 00:00	22:54:41	1.285	93.595	116.3
15/12/2019 00:00	22:54:51	1.293	94.225	117.3
15/12/2019 00:00	22:55:01	1.275	92.875	118.2
15/12/2019 00:00	22:55:11	1.285	93.645	119.2
15/12/2019 00:00	22:55:21	1.274	92.847	120.1
15/12/2019 00:00	22:55:31	1.276	92.922	121
15/12/2019 00:00	22:55:41	1.278	93.09	121.9
15/12/2019 00:00	22:55:51	1.276	92.981	122.9
15/12/2019 00:00	22:56:01	1.279	93.151	123.8
15/12/2019 00:00	22:56:11	1.284	93.52	124.7
15/12/2019 00:00	22:56:21	1.285	93.621	125.7
15/12/2019 00:00	22:56:31	1.278	93.109	126.6
15/12/2019 00:00	22:56:41	1.27	92.531	127.5
15/12/2019 00:00	22:56:51	1.279	93.148	128.5
15/12/2019 00:00	22:57:01	1.267	92.304	129.4
15/12/2019 00:00	22:57:11	1.279	93.169	130.3

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE TROJES



ING. JOSE SANTOS ESCAMILLA LOPEZ

15/12/2019 00:00	22:57:21	1.279	93.14	131.3
15/12/2019 00:00	22:57:31	1.281	93.335	132.2
15/12/2019 00:00	22:57:41	1.27	92.556	133.1
15/12/2019 00:00	22:57:51	1.28	93.258	134.1
15/12/2019 00:00	22:58:01	1.268	92.339	135
15/12/2019 00:00	22:58:11	1.281	93.325	135.9
15/12/2019 00:00	22:58:21	1.286	93.659	136.9
15/12/2019 00:00	22:58:31	1.278	93.087	137.8
15/12/2019 00:00	22:58:41	1.278	93.071	138.7
15/12/2019 00:00	22:58:51	1.28	93.223	139.6
15/12/2019 00:00	22:59:01	1.285	93.584	140.6
15/12/2019 00:00	22:59:11	1.279	93.185	141.5
15/12/2019 00:00	22:59:21	1.283	93.45	142.4
15/12/2019 00:00	22:59:31	1.276	92.993	143.3
15/12/2019 00:00	22:59:41	1.278	93.138	144.3
15/12/2019 00:00	22:59:51	1.284	93.511	145.2
15/12/2019 00:00	23:00:01	1.284	93.558	146.2
15/12/2019 00:00	23:00:11	1.278	93.116	147.1
15/12/2019 00:00	23:00:21	1.283	93.459	148
15/12/2019 00:00	23:00:31	1.285	93.646	149
15/12/2019 00:00	23:00:41	1.286	93.7	149.9
15/12/2019 00:00	23:00:51	1.291	94.026	150.8
15/12/2019 00:00	23:01:01	1.279	93.193	151.8
15/12/2019 00:00	23:01:11	1.282	93.414	152.7
15/12/2019 00:00	23:01:21	1.289	93.876	153.7
15/12/2019 00:00	23:01:31	1.291	94.081	154.6
15/12/2019 00:00	23:01:41	1.279	93.149	155.5
15/12/2019 00:00	23:01:51	1.274	92.787	156.4
15/12/2019 00:00	23:02:01	1.285	93.595	157.4
15/12/2019 00:00	23:02:11	1.287	93.765	158.3
15/12/2019 00:00	23:02:21	1.287	93.78	159.3
15/12/2019 00:00	23:02:31	1.281	93.287	160.2
15/12/2019 00:00	23:02:41	1.281	93.323	161.1
15/12/2019 00:00	23:02:51	1.29	93.956	162.1
15/12/2019 00:00	23:03:01	1.289	93.89	163
15/12/2019 00:00	23:03:11	1.283	93.443	163.9
15/12/2019 00:00	23:03:21	1.279	93.21	164.9
15/12/2019 00:00	23:03:31	1.287	93.786	165.8
15/12/2019 00:00	23:03:41	1.286	93.685	166.8
15/12/2019 00:00	23:03:51	1.288	93.819	167.7

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
 TANQUE TROJES



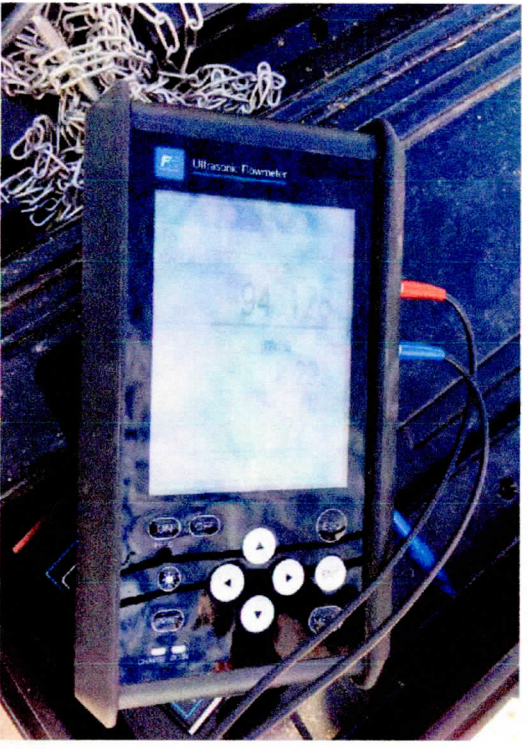
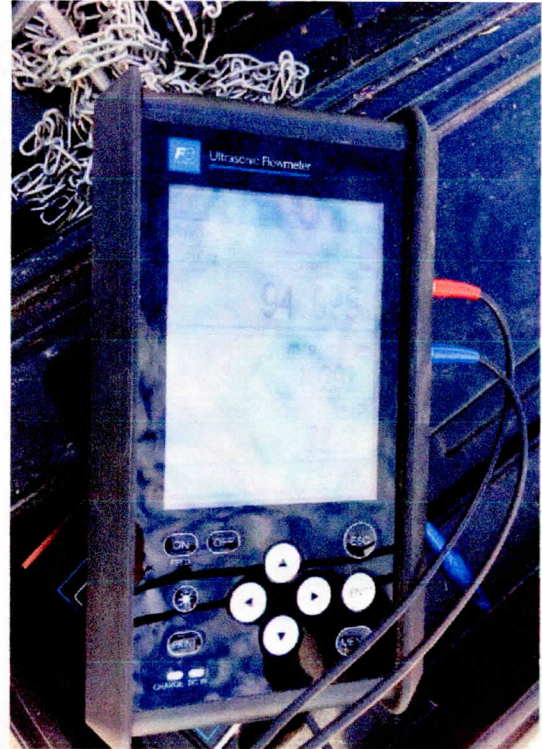
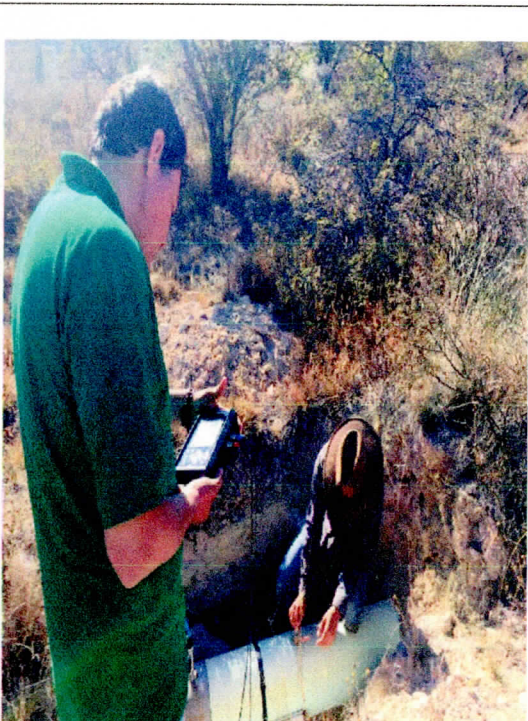
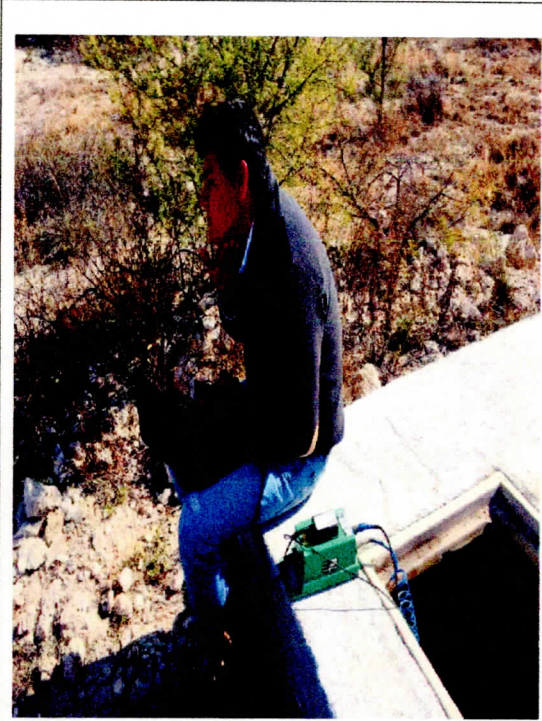
ING. JOSE SANTOS ESCAMILLA LOPEZ

15/12/2019 00:00	23:04:01	1.277	93.008	168.6
15/12/2019 00:00	23:04:11	1.287	93.734	169.5
15/12/2019 00:00	23:04:21	1.278	93.128	170.5
15/12/2019 00:00	23:04:31	1.289	93.935	171.4
15/12/2019 00:00	23:04:41	1.292	94.093	172.4
15/12/2019 00:00	23:04:51	1.289	93.91	173.3
15/12/2019 00:00	23:05:01	1.279	93.208	174.2
15/12/2019 00:00	23:05:11	1.289	93.903	175.2
15/12/2019 00:00	23:05:21	1.288	93.808	176.1
15/12/2019 00:00	23:05:31	1.291	94.061	177.1
15/12/2019 00:00	23:05:41	1.292	94.091	178
15/12/2019 00:00	23:05:51	1.282	93.396	178.9
15/12/2019 00:00	23:06:01	1.296	94.43	179.9
15/12/2019 00:00	23:06:11	1.297	94.521	180.8
15/12/2019 00:00	23:06:21	1.285	93.623	181.8
15/12/2019 00:00	23:06:31	1.287	93.752	182.7
15/12/2019 00:00	23:06:41	1.289	93.898	183.6
15/12/2019 00:00	23:06:51	1.284	93.565	184.5
15/12/2019 00:00	23:07:01	1.298	94.542	185.5
15/12/2019 00:00	23:07:11	1.291	94.03	186.4
15/12/2019 00:00	23:07:21	1.294	94.279	187.4
15/12/2019 00:00	23:07:31	1.282	93.393	188.3
15/12/2019 00:00	23:07:41	1.284	93.549	189.3
15/12/2019 00:00	23:07:51	1.287	93.792	190.2
15/12/2019 00:00	23:08:01	1.286	93.661	191.1
15/12/2019 00:00	23:08:11	1.292	94.091	192.1
15/12/2019 00:00	23:08:21	1.291	94.081	193
15/12/2019 00:00	23:08:31	1.289	93.868	194
15/12/2019 00:00	23:08:41	1.288	93.828	194.9
15/12/2019 00:00	23:08:51	1.283	93.455	195.8
15/12/2019 00:00	23:09:01	1.283	93.47	196.8
15/12/2019 00:00	23:09:11	1.279	93.183	197.7
15/12/2019 00:00	23:09:21	1.287	93.74	198.6
15/12/2019 00:00	23:09:31	1.283	93.474	199.5
15/12/2019 00:00	23:09:41	1.295	94.312	200.5
15/12/2019 00:00	23:09:51	1.29	93.96	201.5
15/12/2019 00:00	23:10:01	1.287	93.781	202.4
15/12/2019 00:00	23:10:11	1.285	93.642	203.3

IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL - MATEHUALA
Tanque Trojes



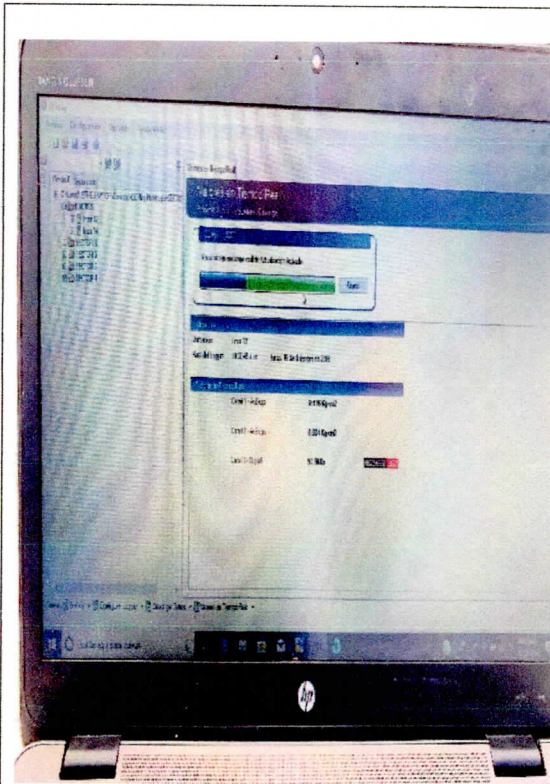
ING. JOSE SANTOS ESCAMILLA LOPEZ



IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL - MATEHUALA
Tanque Trojes



ING. JOSE SANTOS ESCAMILLA LOPEZ



IDENTIFICACIÓN DE PÉRDIDAS FÍSICAS Y MEDICIÓN EN EL ACUEDUCTO CEDRAL – MATEHUALA
TROJE 12 PULGADAS



ING. JOSE SANTOS ESCAMILLA LOPEZ

4		'VELOCITY	'FLOW RATE	'+TOTALIZER
		m/s	L/s	m3
15/12/2019 00:00	06:10:33	0	0	0
15/12/2019 00:00	06:10:43	1.218	87.478	0.4
15/12/2019 00:00	06:10:53	1.477	106.072	1.4
15/12/2019 00:00	06:11:03	1.513	108.658	2.5
15/12/2019 00:00	06:11:13	1.507	108.186	3.5
15/12/2019 00:00	06:11:23	1.516	108.85	4.6
15/12/2019 00:00	06:11:33	1.52	109.128	5.7
15/12/2019 00:00	06:11:43	1.519	109.097	6.8
15/12/2019 00:00	06:11:53	1.51	108.466	7.9
15/12/2019 00:00	06:12:03	1.521	109.218	9
15/12/2019 00:00	06:12:13	1.524	109.46	10.1
15/12/2019 00:00	06:12:23	1.517	108.915	11.2
15/12/2019 00:00	06:12:33	1.509	108.373	12.2
15/12/2019 00:00	06:12:43	1.517	108.957	13.2
15/12/2019 00:00	06:12:53	1.506	108.142	13.7
15/12/2019 00:00	06:13:03	1.51	108.433	14.8
15/12/2019 00:00	06:13:13	1.512	108.597	15.8
15/12/2019 00:00	06:13:23	1.507	108.212	17
15/12/2019 00:00	06:13:33	1.521	103.48	17.9
15/12/2019 00:00	06:13:43	1.531	104.185	18.9
15/12/2019 00:00	06:13:53	1.532	104.281	18.9
15/12/2019 00:00	06:14:03	1.533	104.293	18.9
15/12/2019 00:00	06:14:13	1.511	102.826	19.9
15/12/2019 00:00	06:14:23	1.513	102.984	20.9
15/12/2019 00:00	06:14:33	1.49	101.414	21.9
15/12/2019 00:00	06:14:43	1.5	102.084	22.9
15/12/2019 00:00	06:14:53	1.507	102.569	23.9
15/12/2019 00:00	06:15:03	1.509	111.25	24.9
15/12/2019 00:00	06:15:13	1.517	111.858	25.8
15/12/2019 00:00	06:15:23	1.521	112.147	26.5
15/12/2019 00:00	06:15:33	1.534	113.06	27.7
15/12/2019 00:00	06:15:43	1.519	111.982	28.8
15/12/2019 00:00	06:15:53	1.523	112.264	29.9
15/12/2019 00:00	06:16:03	1.519	111.954	31.1
15/12/2019 00:00	06:16:13	1.525	112.433	32.1
15/12/2019 00:00	06:16:23	1.527	112.566	33.3

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15/12/2019 00:00	06:16:33	1.531	112.88	34.4
15/12/2019 00:00	06:16:43	1.531	112.868	35.5
15/12/2019 00:00	06:16:53	1.535	113.174	36.7
15/12/2019 00:00	06:17:03	1.523	112.258	37.8
15/12/2019 00:00	06:17:13	1.533	113.016	38.9
15/12/2019 00:00	06:17:23	1.525	112.419	40
15/12/2019 00:00	06:17:33	1.513	111.516	41.2
15/12/2019 00:00	06:17:43	1.52	112.046	42.3
15/12/2019 00:00	06:17:53	1.531	112.848	43.4
15/12/2019 00:00	06:18:03	1.523	112.234	44.5
15/12/2019 00:00	06:18:13	1.523	112.281	45.7
15/12/2019 00:00	06:18:23	1.528	112.611	46.8
15/12/2019 00:00	06:18:33	1.515	111.643	47.9
15/12/2019 00:00	06:18:43	1.512	111.429	49
15/12/2019 00:00	06:18:53	1.518	111.891	50.1
15/12/2019 00:00	06:19:03	1.514	111.607	51.2
15/12/2019 00:00	06:19:13	1.526	112.466	52.3
15/12/2019 00:00	06:19:23	1.525	112.439	53.5
15/12/2019 00:00	06:19:33	1.516	111.74	54.6
15/12/2019 00:00	06:19:43	1.511	111.408	55.7
15/12/2019 00:00	06:19:53	1.515	111.684	56.9
15/12/2019 00:00	06:20:03	1.506	111.046	57.9
15/12/2019 00:00	06:20:13	1.517	111.789	59.1
15/12/2019 00:00	06:20:23	1.511	111.368	60.2
15/12/2019 00:00	06:20:33	1.513	111.51	61.3
15/12/2019 00:00	06:20:43	1.527	112.54	62.4
15/12/2019 00:00	06:20:53	1.525	112.443	63.5
15/12/2019 00:00	06:21:03	1.524	112.36	64.7
15/12/2019 00:00	06:21:13	1.525	112.425	65.8
15/12/2019 00:00	06:21:23	1.529	112.701	66.9
15/12/2019 00:00	06:21:33	1.501	110.676	68
15/12/2019 00:00	06:21:43	1.51	111.28	69.1
15/12/2019 00:00	06:21:53	1.511	111.38	70.2
15/12/2019 00:00	06:22:03	1.511	111.371	71.4
15/12/2019 00:00	06:22:13	1.507	111.118	72.5
15/12/2019 00:00	06:22:23	1.519	111.962	73.6
15/12/2019 00:00	06:22:33	1.521	112.126	74.7
15/12/2019 00:00	06:22:43	1.502	110.704	75.8
15/12/2019 00:00	06:22:53	1.515	111.67	77
15/12/2019 00:00	06:23:03	1.529	112.682	78.1

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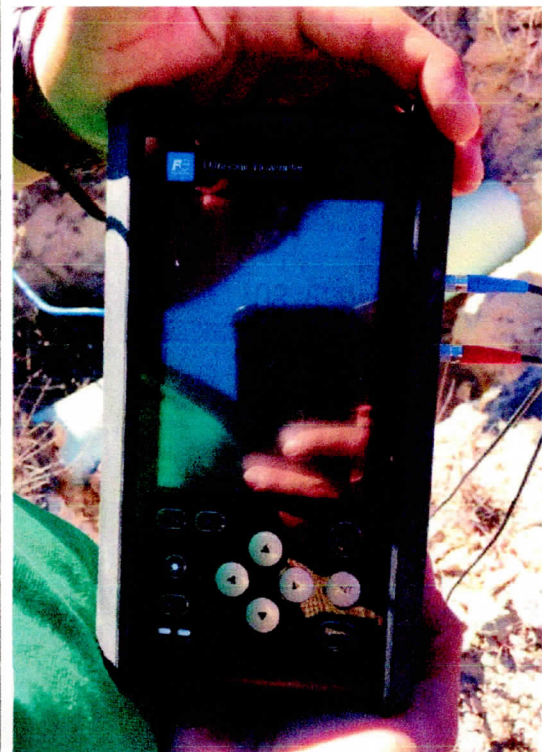
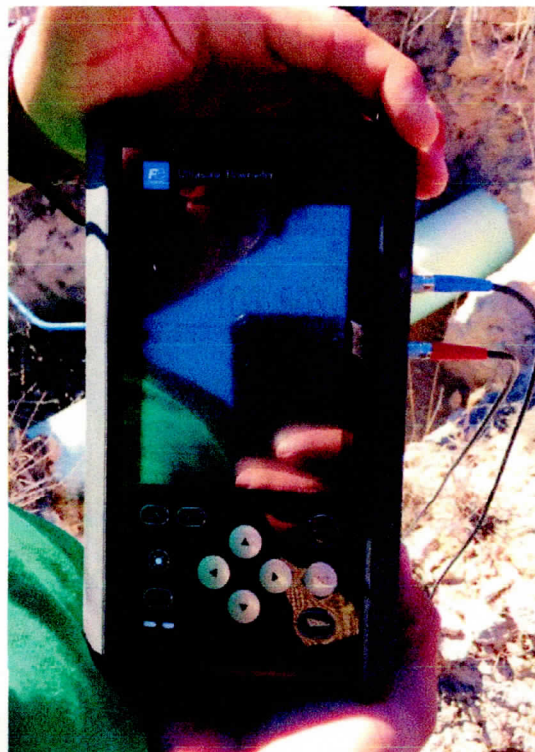
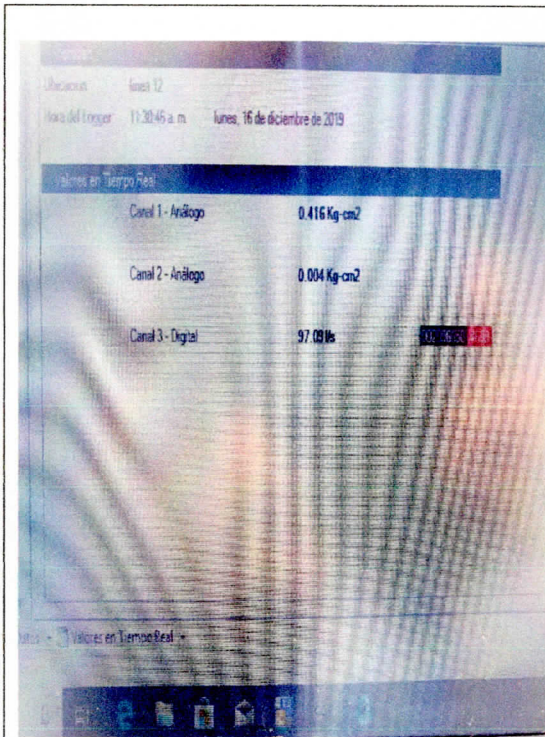
ING. JOSE SANTOS ESCAMILLA LOPEZ

15/12/2019 00:00	06:23:13	1.524	112.307	79.2
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Trojes 12 Pulgadas



ING. JOSE SANTOS ESCAMILLA LOPEZ



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Trojes 12 Pulgadas



ING. JOSE SANTOS ESCAMILLA LOPEZ

