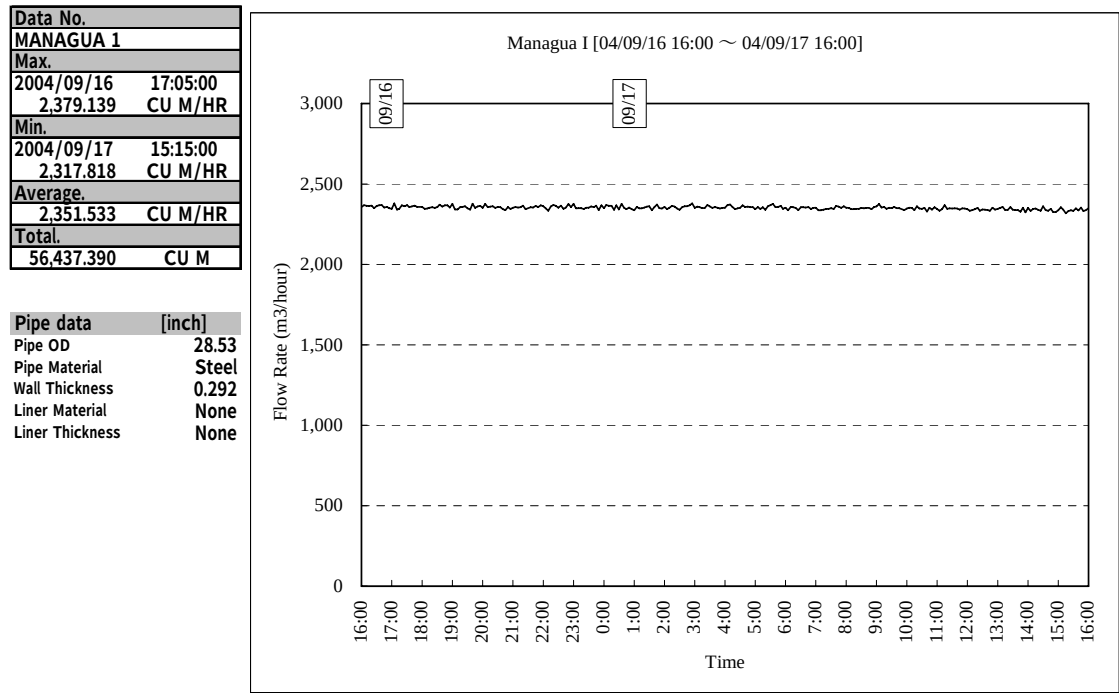
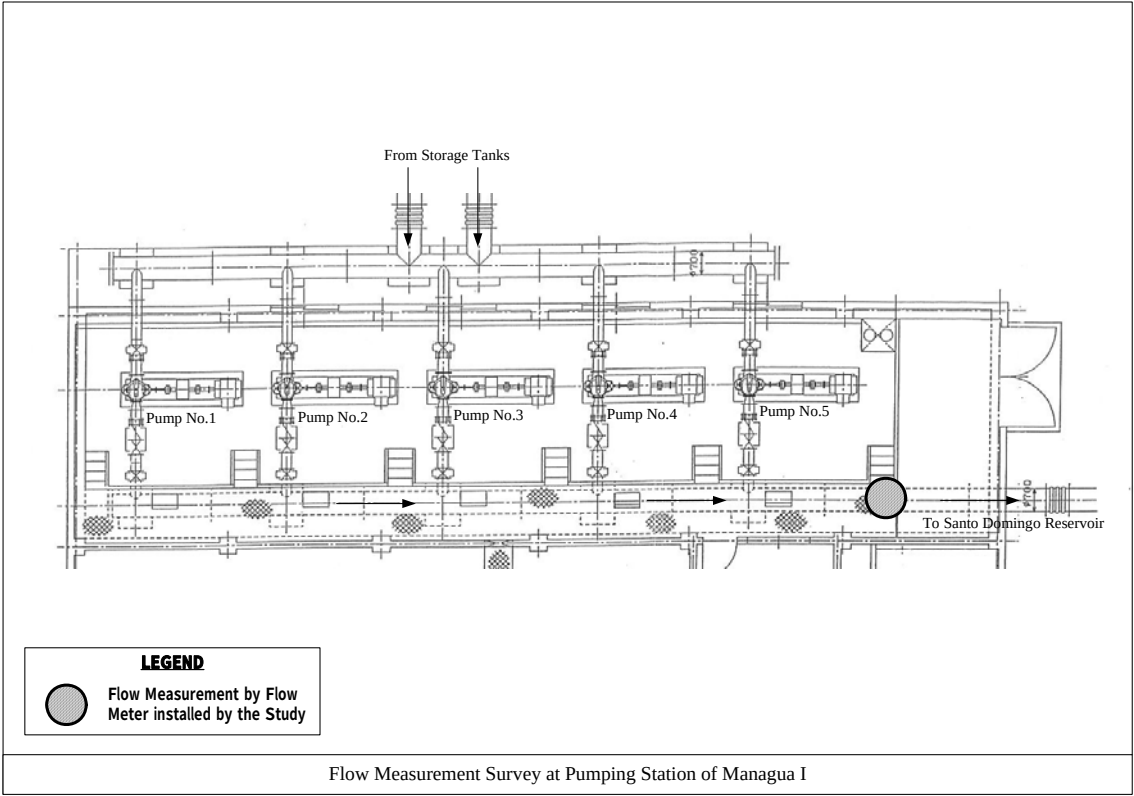
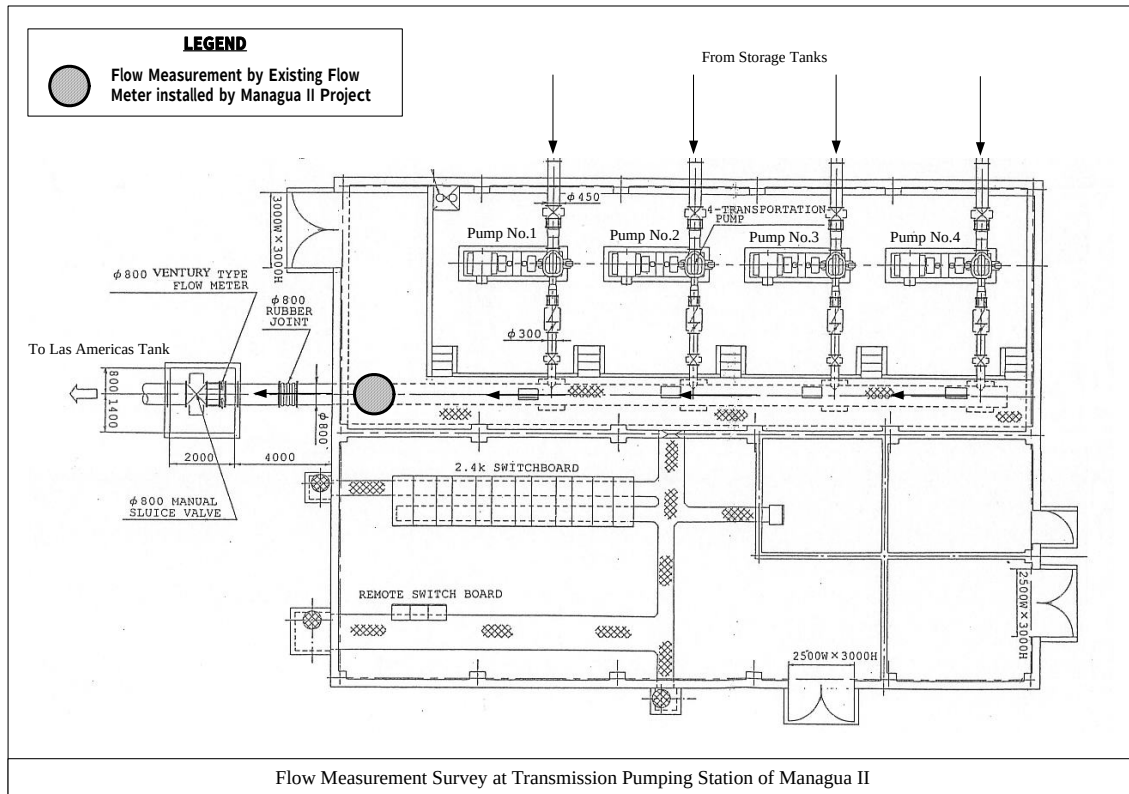


11. Managua I

Flow Measurement Location

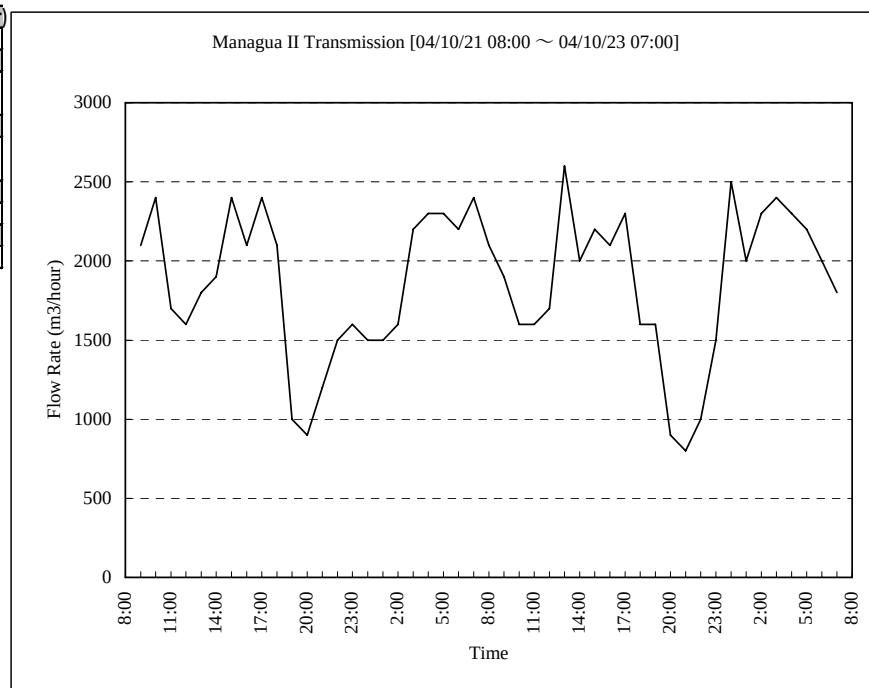


Flow Measurement Location



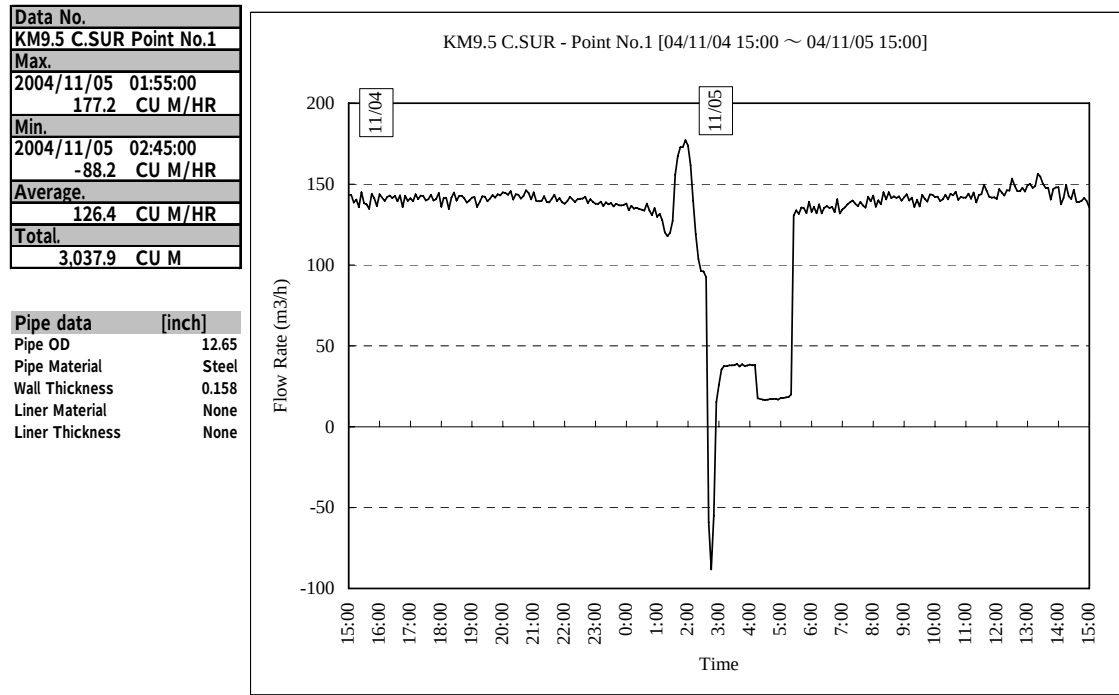
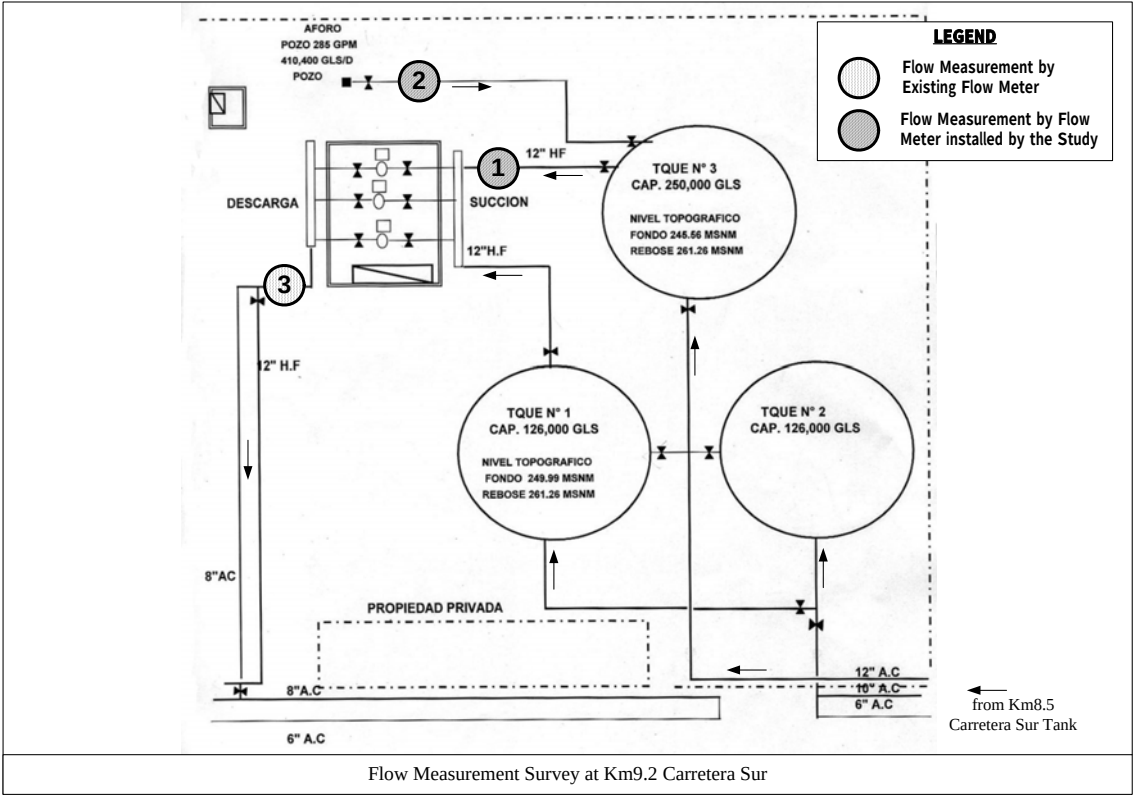
Data No. (by Existing Meter)		
Managua II Transmission		
Max.		
2004/10/22	13:00	
2,600.0	CU M/HR	
Min.		
2004/10/22	21:00	
800.0	CU M/HR	
Average.		
1,866.0	CU M/HR	
Total.		
87,700.0	CU M	

Note: reading by ENACAL



14. Km9.2 Carretera Sur

Flow Measurement Location

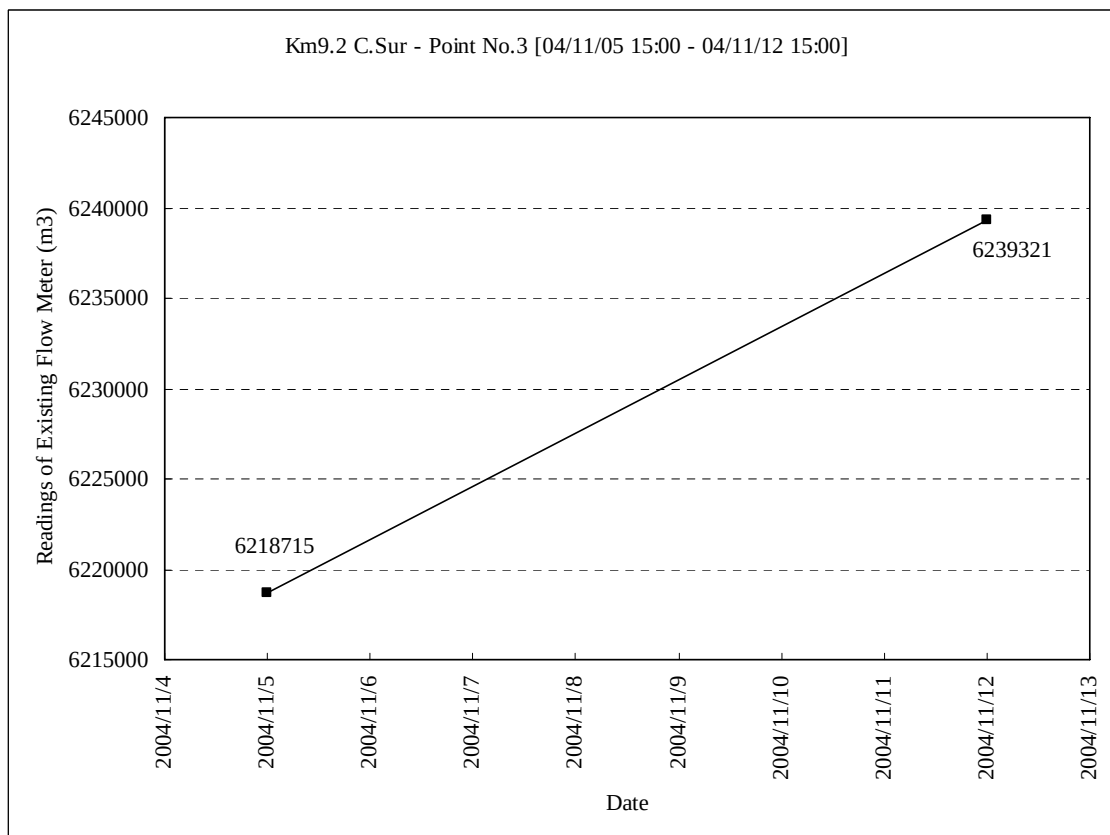
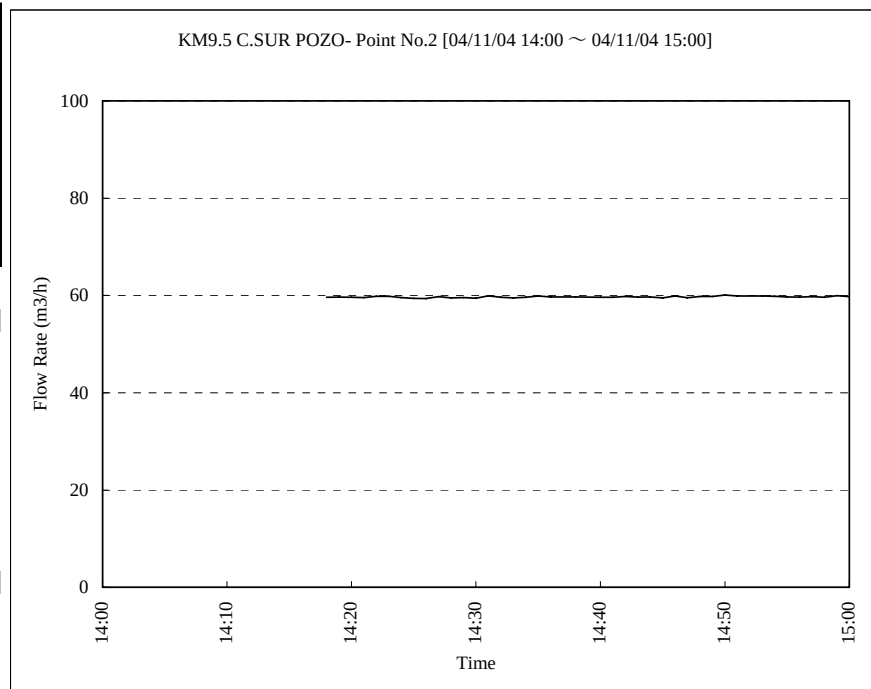


Data No. (Point No.2)
KM9.5 C.SUR POZO
Max.
2004/11/05 01:55:00
60.1 CU M/HR
Min.
2004/11/05 02:45:00
59.4 CU M/HR
Average.
59.7 CU M/HR
Total. (40minute)
39.8 CU M

Pipe data	[inch]
Pipe OD	4.58
Pipe Material	Steel
Wall Thickness	0.17
Liner Material	None
Liner Thickness	None

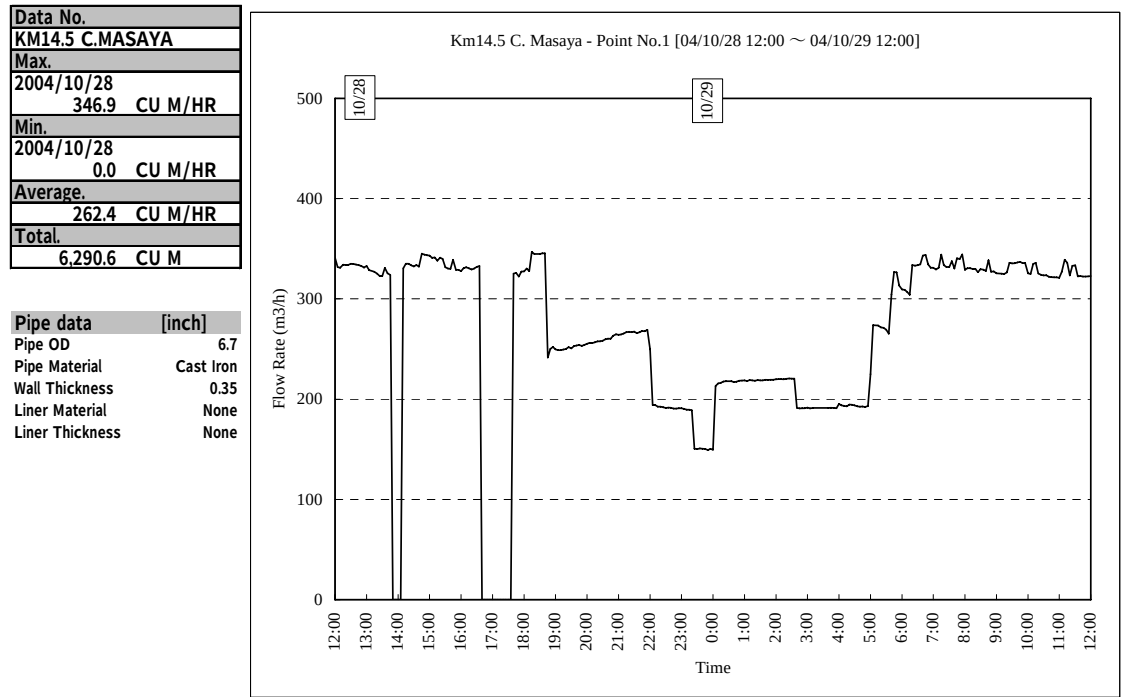
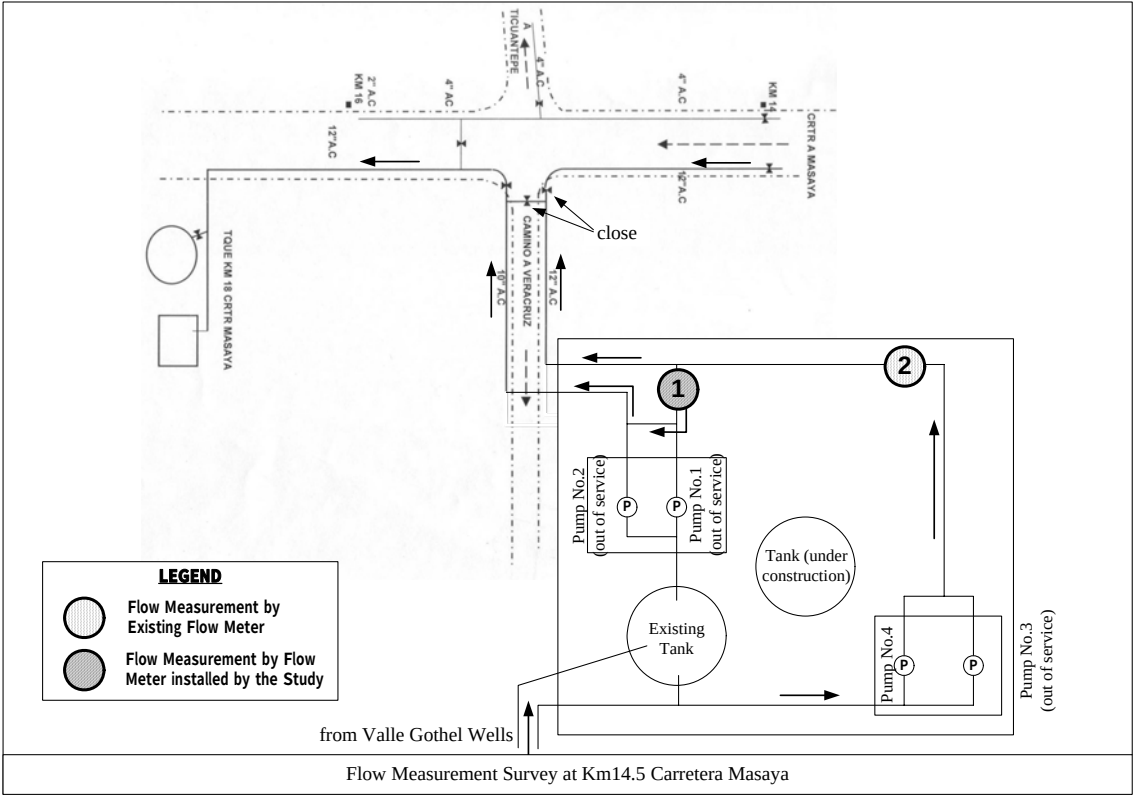
Meter Reading
14:20 1776216
15:00 1776257
total 41

Balance
Existing meter 41.00
Measured value 39.80
97.07%



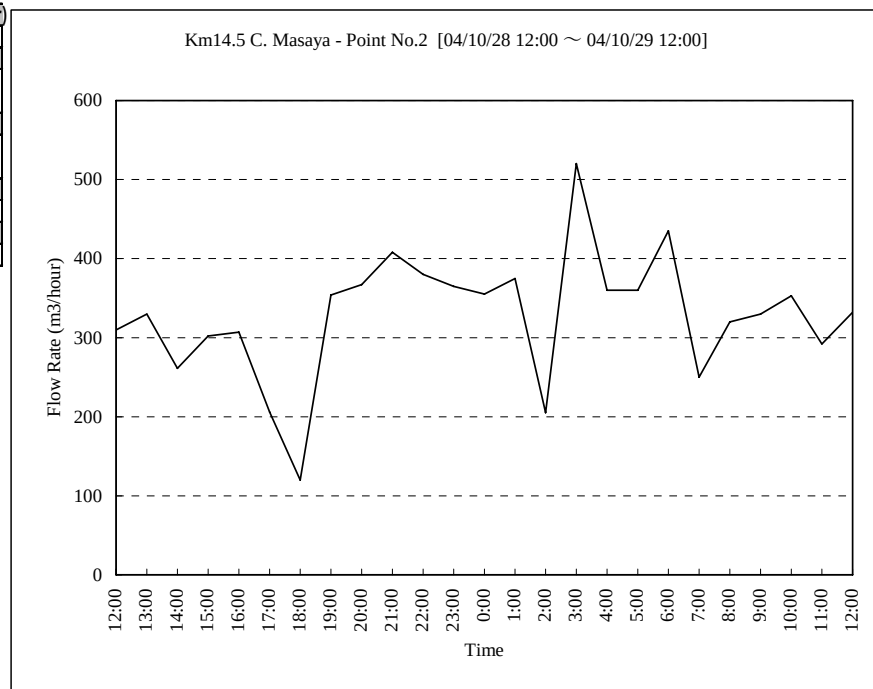
15. Km14.5 Carretera Masaya

Flow Measurement Location



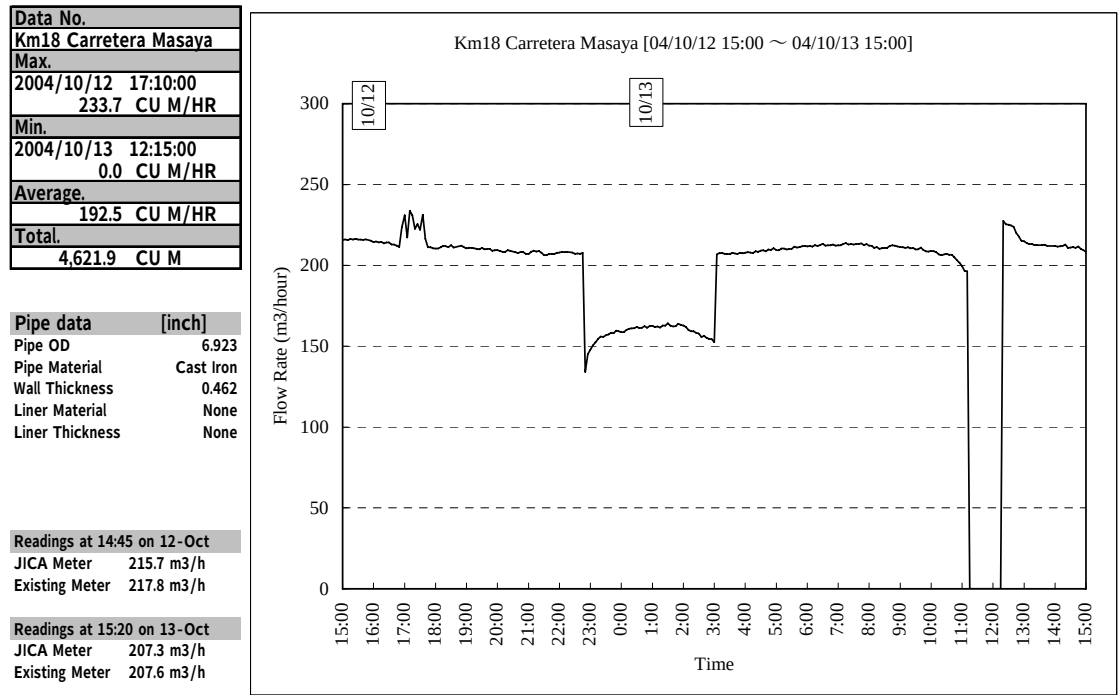
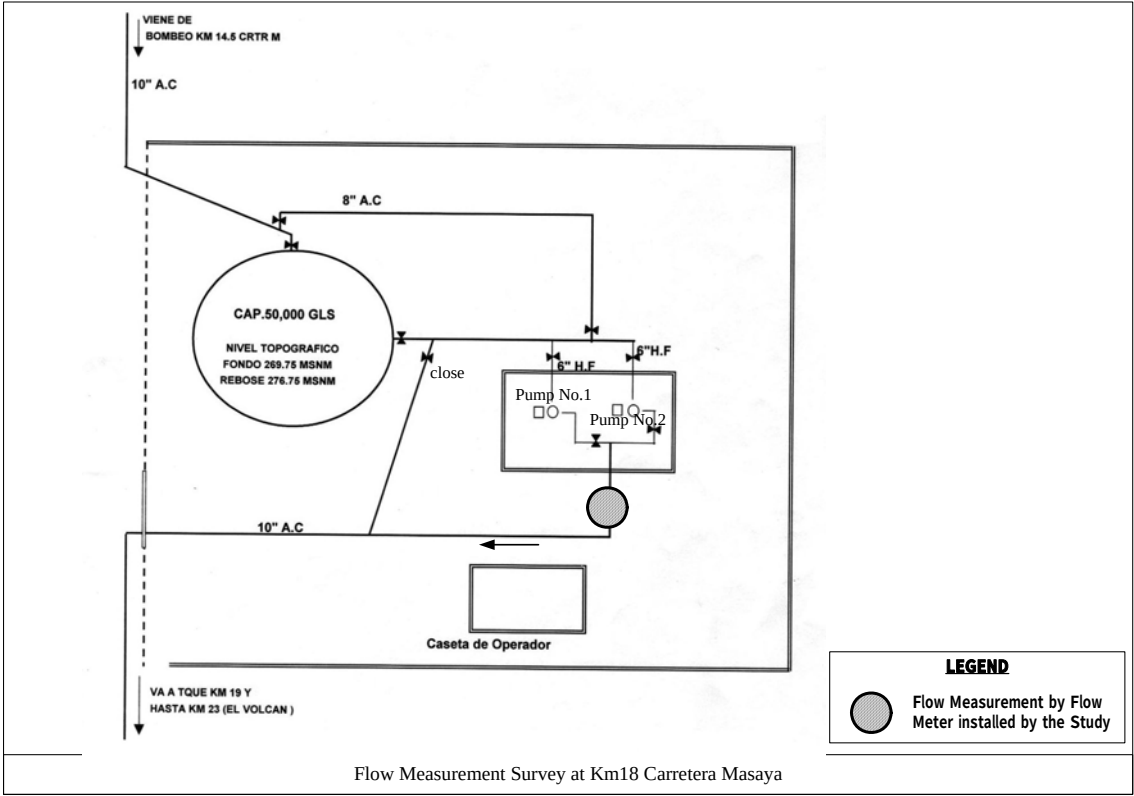
Data No. (by Existing Meter)		
Km14.5 Carretera Masaya		
Max.		
2004/10/29	3:00	
520.0	CU M/HR	
Min.		
2004/10/28	18:00	
120.0	CU M/HR	
Average.		
328.6	CU M/HR	
Total.		
7,887.0	CU M	

Note: reading by ENACAL



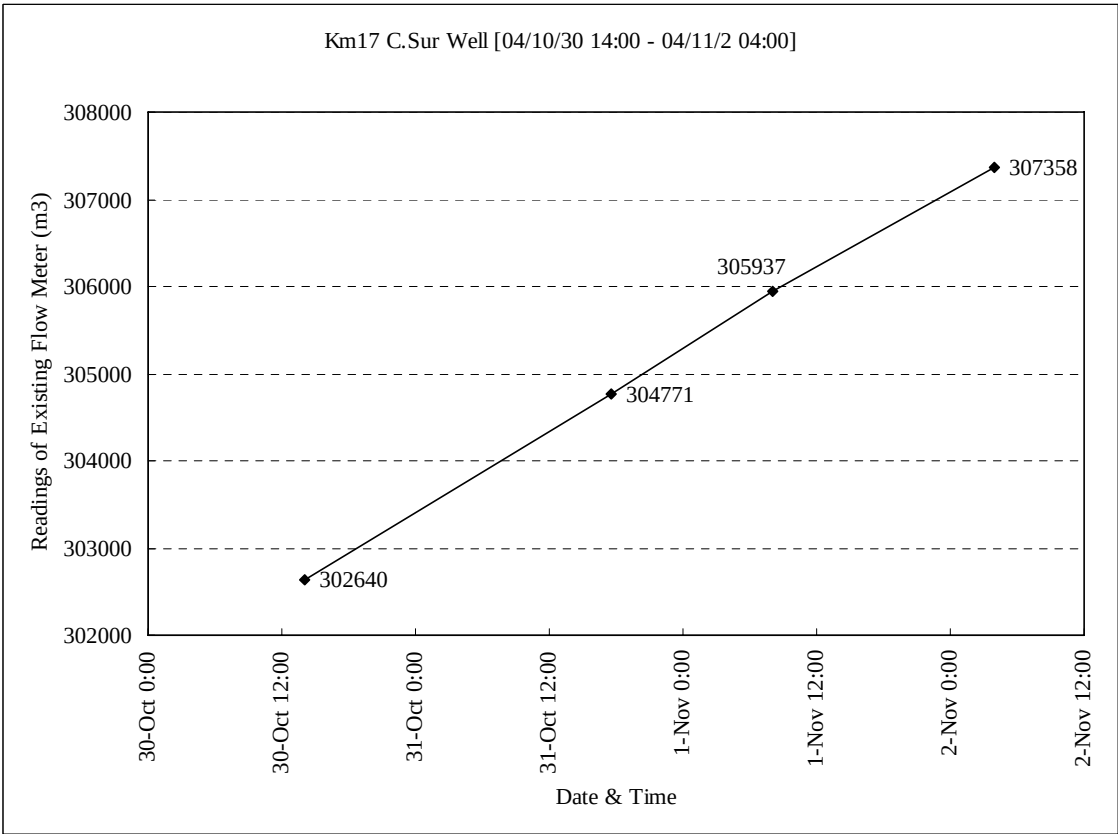
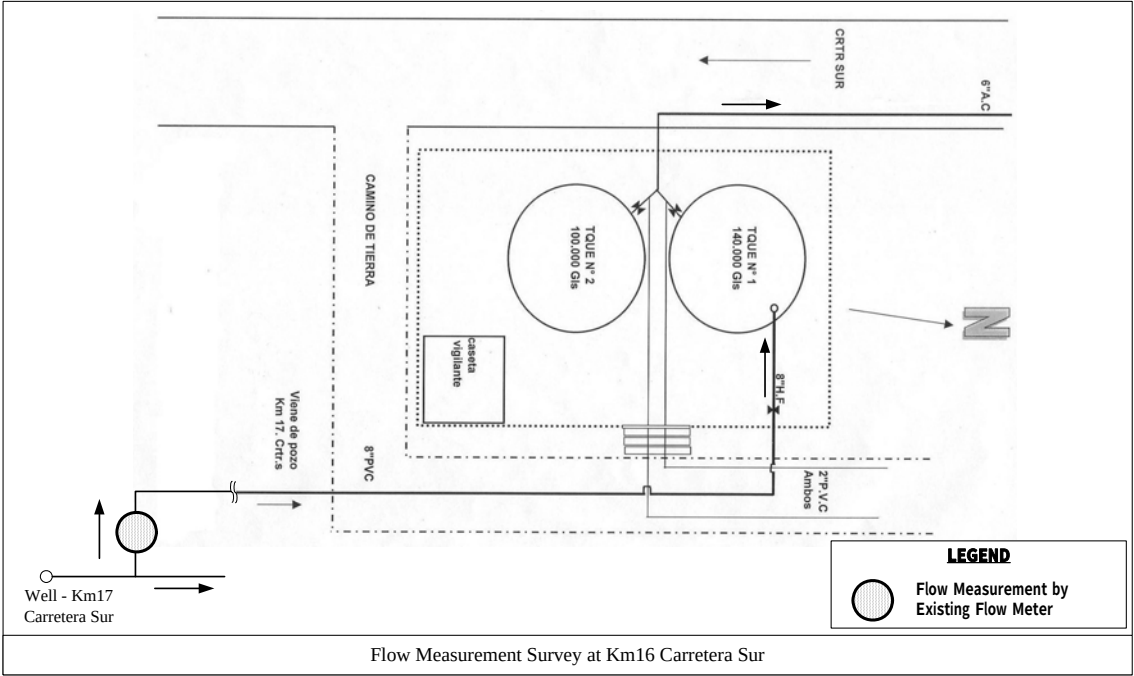
16. Km18.5 Carretera Masaya

Flow Measurement Location



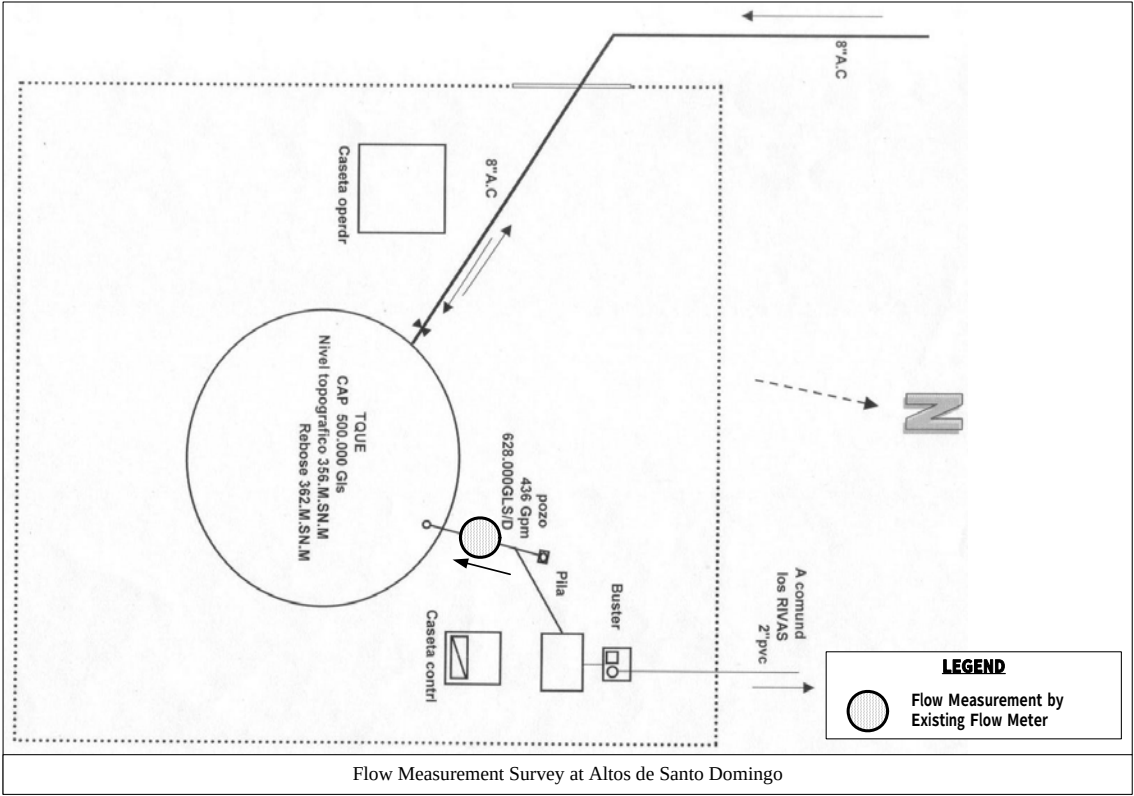
17. Km16 Carretera Sur

Flow Measurement Location



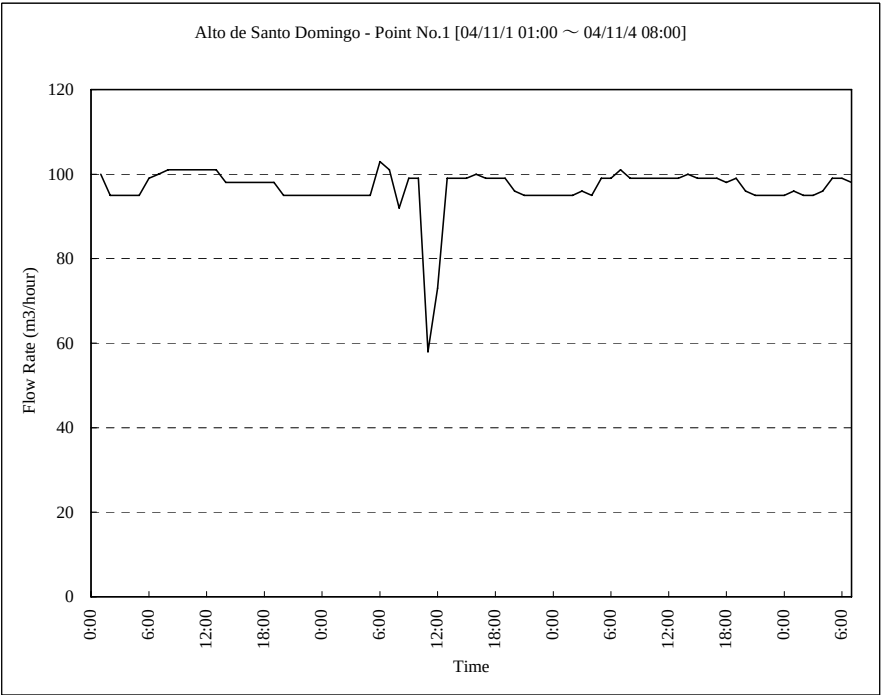
18. Altos de Santo Domingo

Flow Measurement Location



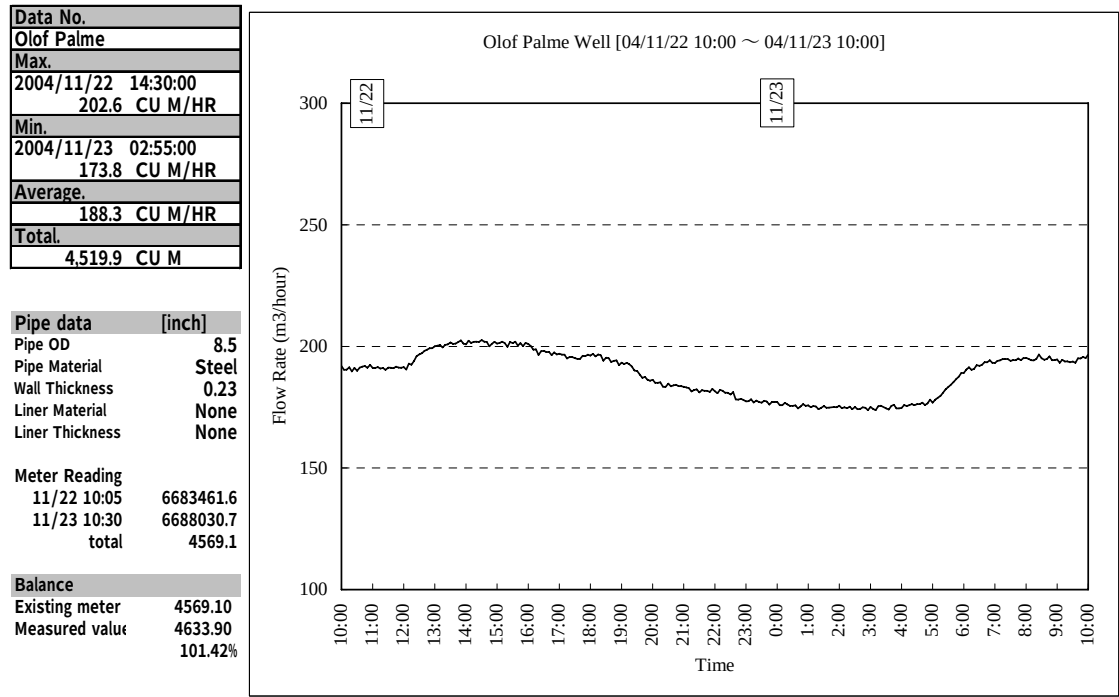
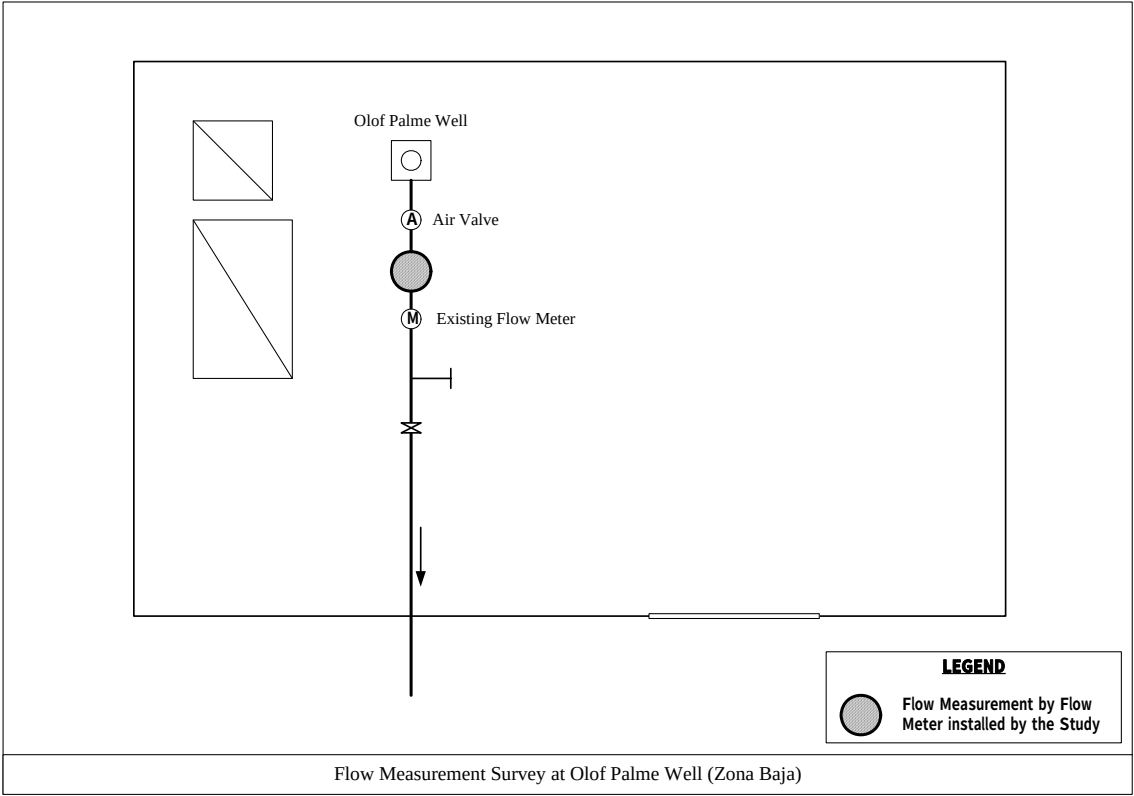
Data No.(by Existing Meter)		
Altos de Santo Domingo		
Max.		
2004/11/2	6:00	
103.0	CU M/HR	
Min.		
2004/11/2	11:00	
58.0	CU M/HR	
Average.		
96.7	CU M/HR	
Total.		
7,640.0	CU M	
2,321.0	CU M/DAY	

Note: reading by ENACAL



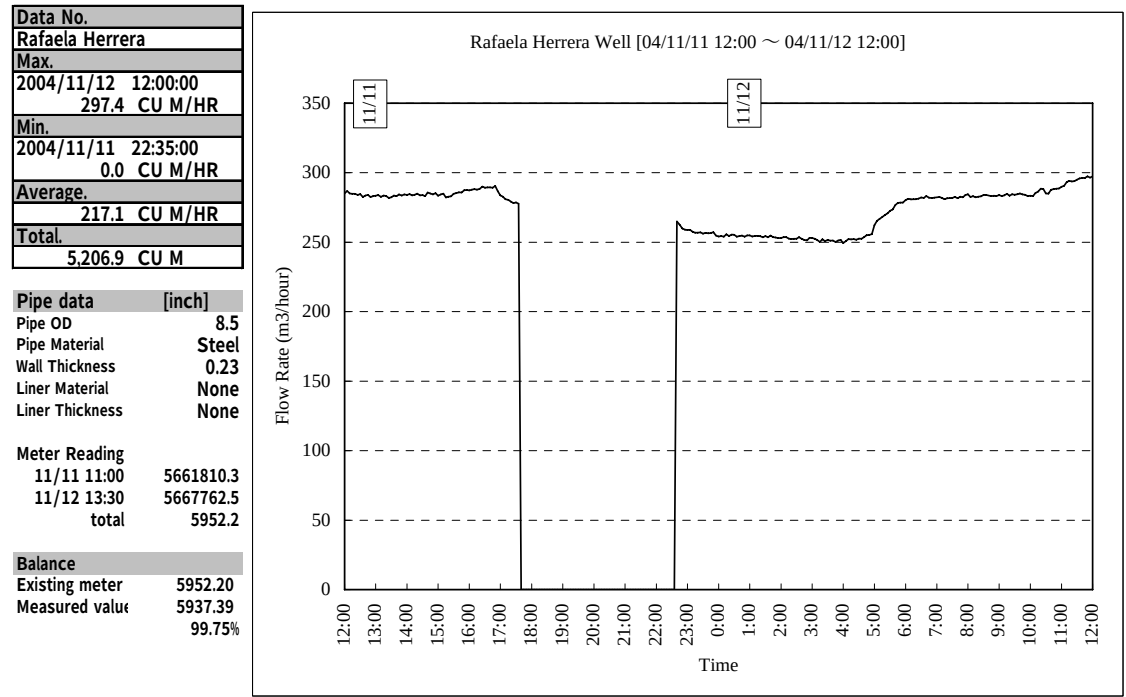
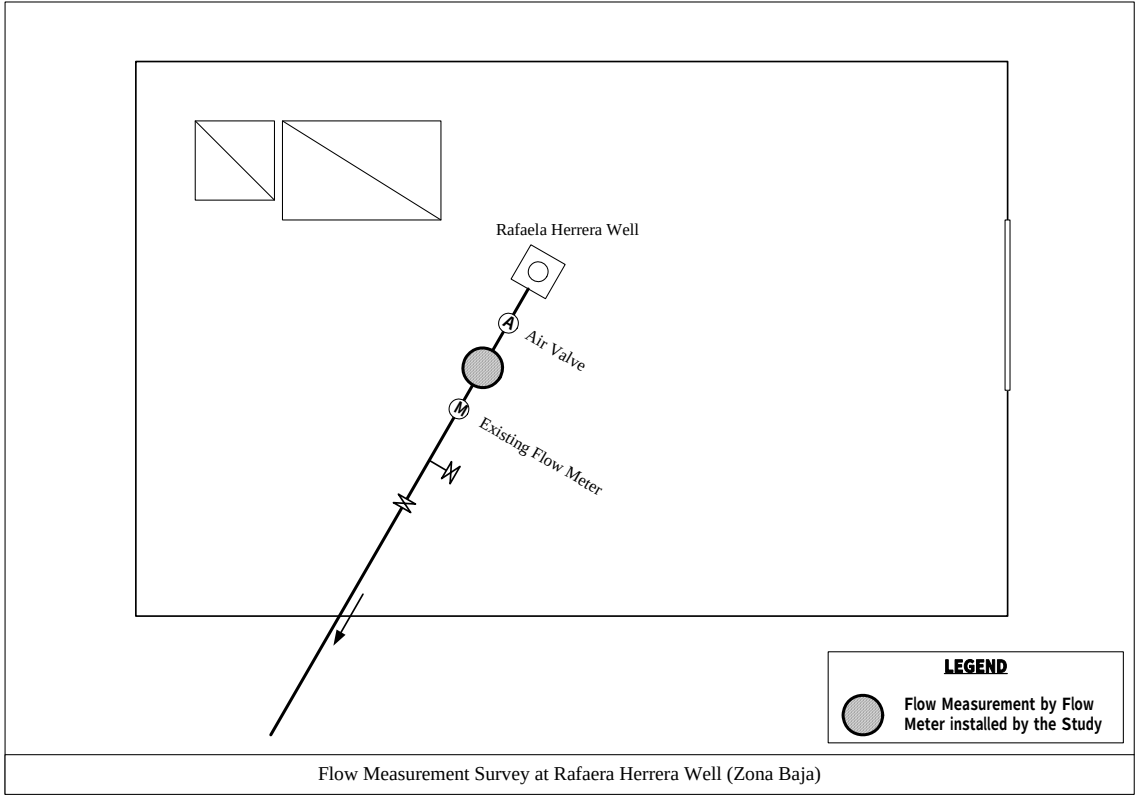
19. Olof Palme Well

Flow Measurement Location



20. Rafaela Herrera Well

Flow Measurement Location

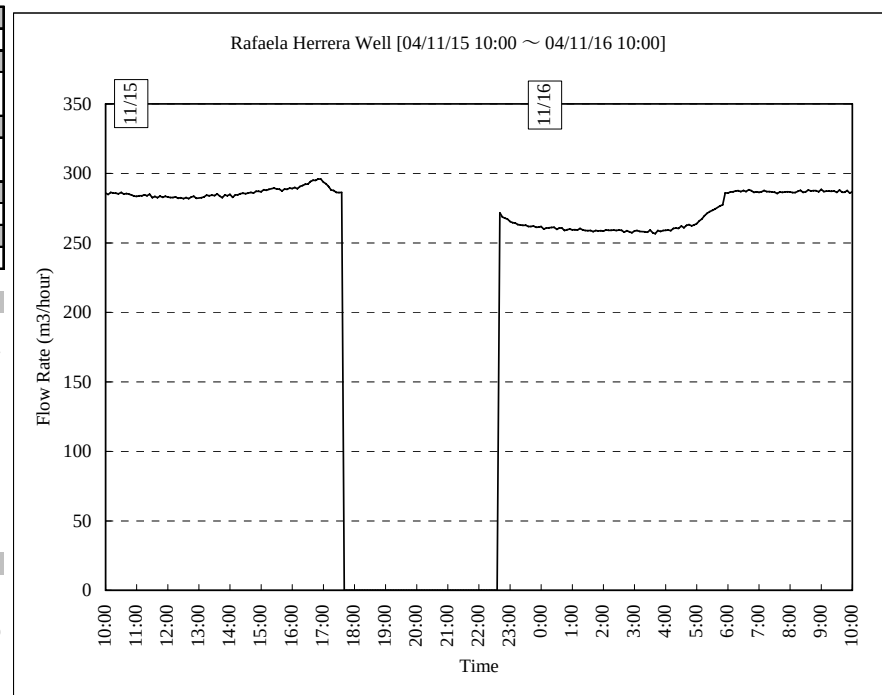


Data No.
Rafaela Herrera
Max.
2004/11/15 16:50:00
296.0 CU M/HR
Min.
2004/11/15 22:35:00
0.0 CU M/HR
Average.
219.6 CU M/HR
Total.
5,265.3 CU M

Pipe data	[inch]
Pipe OD	8.5
Pipe Material	Steel
Wall Thickness	0.23
Liner Material	None
Liner Thickness	None

Meter Reading	
11/15 10:05	5682648.3
11/16 10:30	5688035.5
total	5387.2

Balance	
Existing meter	5387.20
Measured value	5385.00
	99.96%



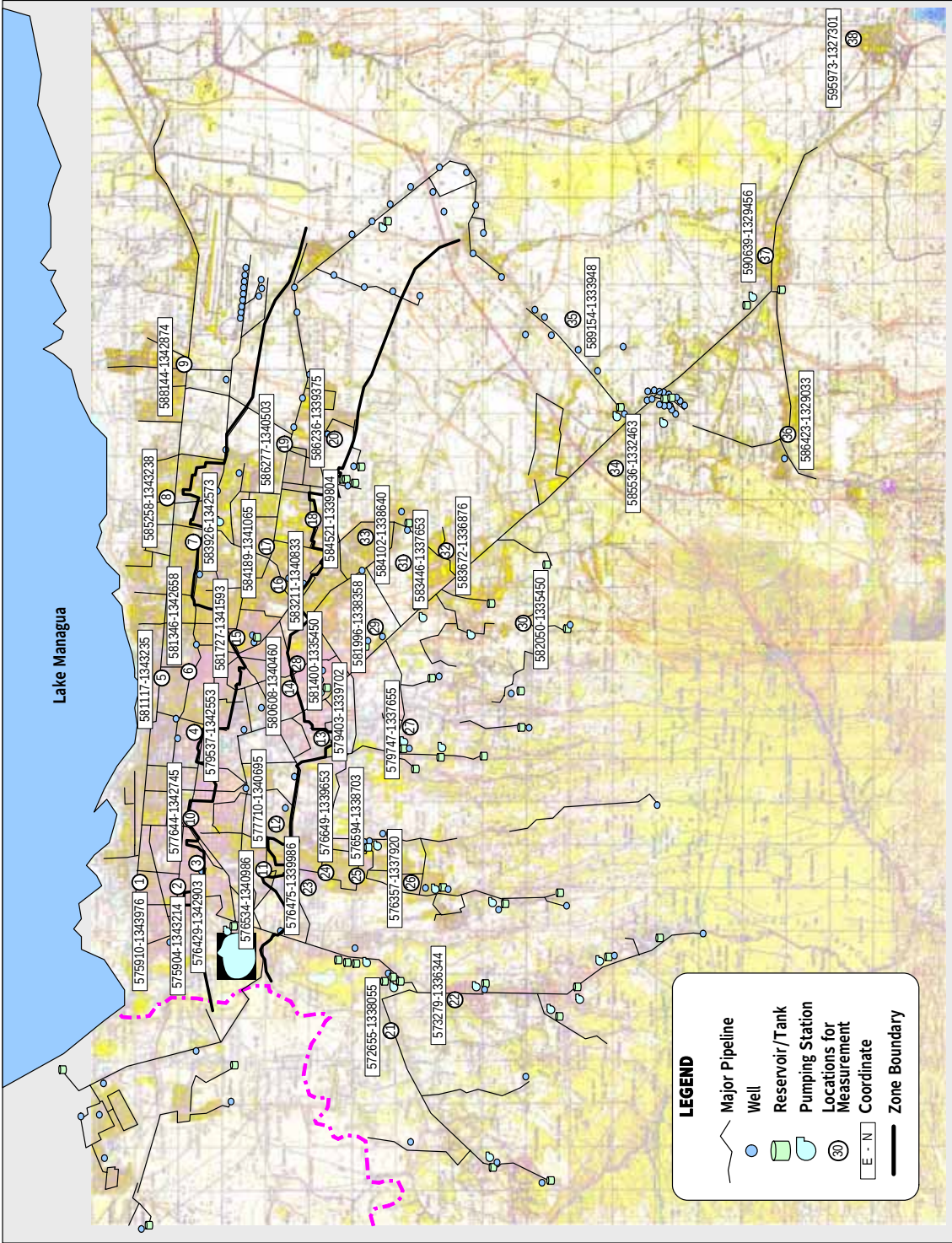
ANNEX 5B

Data Sheet for Pressure Measurement

Pressure Measurement Locations

No.	Zone	Date	Coordenadas		Measured Value [MPa]			Measured Value [psi]		
		[Start - Finish]	[Este]	[Norte]	[High]	[Average*]	[Low]	[High]	[Average*]	[Low]
1	Baja Oeste	16-17 SEP2004	575910	1343976	0.43	0.25	0.06	62.4	36.3	8.7
2	Baja Oeste	16-17 SEP2004	575904	1343214	0.34	0.17	0.04	49.3	24.7	5.8
3	Baja Oeste	16-17 SEP2004	576429	1342903	0.30	0.14	0.00	43.5	20.3	0.0
4	Baja Centro	11-12 OCT2004	579537	1342553	0.37	0.22	0.00	53.7	31.9	0.0
5	Baja Centro	04-05 OCT2004	581117	1343235	0.56	0.45	0.36	81.2	65.3	52.2
6	Baja Centro	04-05 OCT2004	581346	1342658	0.43	0.34	0.22	62.4	49.3	31.9
7	Baja Este	03-04 NOV2004	583926	1342573	0.47	0.25	0.07	68.2	36.3	10.2
8	Baja Este	14-15 OCT2004	585258	1343238	0.38	0.10	0.10	55.1	14.5	14.5
9	Baja Este	03-04 NOV2004	588144	1342874	0.36	0.25	0.17	52.2	36.3	24.7
10	Alta Oeste	23-24 SEP2004	577644	1342745	0.61	0.46	0.25	88.5	66.7	36.3
11	Alta Oeste	11-12 OCT2004	576534	1340986	0.22	0.09	0.01	31.9	13.1	1.5
12	Alta Oeste	23-24 SEP2004	577710	1340695	0.14	0.04	0.00	20.3	5.8	0.0
13	Alta Centro	28-29 OCT2004	579403	1339702	0.63	0.44	0.30	91.4	63.8	43.5
14	Alta Centro	07-08 OCT2004	580608	1340460	0.27	0.16	0.04	39.2	23.2	5.8
15	Alta Centro	11-12 OCT2004	581727	1341593	0.58	0.42	0.15	84.1	60.9	21.8
16	Alta Este	11-12 OCT2004	583211	1340833	0.31	0.19	0.07	45.0	27.6	10.2
17	Alta Este	14-15 OCT2004	584189	1341065	0.32	0.02	0.02	46.4	2.9	2.9
18	Alta Este	25-26 OCT2004	584521	1339804	0.27	0.11	0.00	39.2	16.0	0.0
19	Alta Este	14-15 OCT2004	586277	1340503	0.32	0.02	0.02	46.4	2.9	2.9
20	Alta Este	11-12 NOV2004	586236	1339375	0.04	0.01	0.00	5.8	1.5	0.0
21	Alta Superior Oeste	28-29 OCT2004	572655	1338055	1.10	0.93	0.62	159.5	134.9	89.9
22	Alta Superior Oeste	18-19 OCT2004	573279	1336344	0.27	0.21	0.10	39.2	30.5	14.5
23	Alta Superior Oeste	18-19 OCT2004	576475	1339986	0.49	0.38	0.30	71.1	55.1	43.5
24	Alta Superior Oeste	27-28 SEP2004	576649	1339653	0.05	0.01	0.00	7.3	1.5	0.0
25	Alta Superior Oeste	27-28 SEP2004	576594	1338703	0.70	0.21	0.00	101.5	30.5	0.0
26	Alta Superior Oeste	27-28 SEP2004	576357	1337920	0.00	0.00	0.00	0.0	0.0	0.0
27	Alta Superior Centro	28-29 OCT2004	579747	1337655	0.61	0.38	0.15	88.5	55.1	21.8
28	Alta Superior Centro	07-08 OCT2004	581400	1340350	0.23	0.11	0.00	33.4	16.0	0.0
29	Alta Superior Centro	25-26 OCT2004	581916	1338358	0.24	0.19	0.08	34.8	27.6	11.6
30	Alta Superior Este	21-22 SEP2004	582050	1335450	0.57	0.35	0.03	82.7	50.8	4.4
31	Alta Superior Este	25-26 OCT2004	583446	1337653	0.50	0.36	0.24	72.5	52.2	34.8
32	Alta Superior Este	21-22 SEP2004	583672	1336876	0.44	0.30	0.19	63.8	43.5	27.6
33	Alta Superior Este	25-26 OCT2004	584102	1338640	0.15	0.03	0.00	21.8	4.4	0.0
34	Fuera de Managua	21-22 SEP2004	585536	1332463	0.66	0.46	0.09	95.7	66.7	13.1
35	Fuera de Managua	15-16 NOV2004	589154	1333948	0.55	0.50	0.45	79.8	72.5	65.3
36	Fuera de Managua	15-16 NOV2004	586423	1329033	0.41	0.25	0.05	59.5	36.3	7.3
37	Fuera de Managua	18-19 NOV2004	590639	1329456	0.34	0.12	0.00	49.3	17.4	0.0
38	Fuera de Managua	18-19 NOV2004	595973	1327301	0.15	0.07	0.00	21.8	10.2	0.0

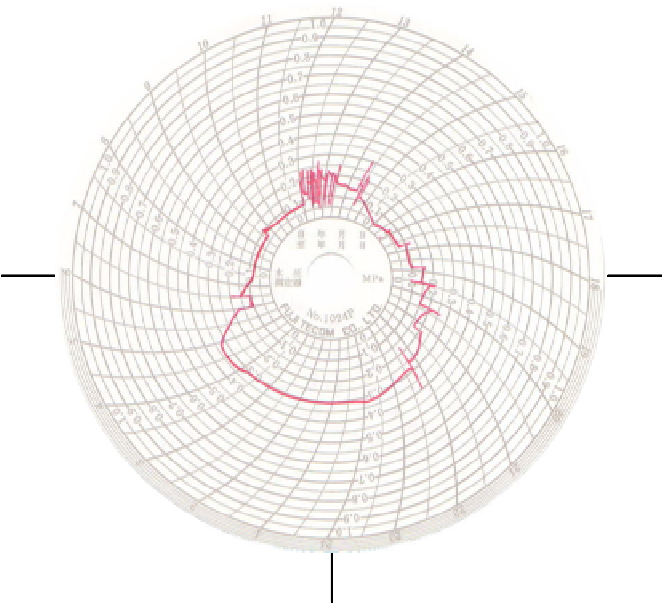
Pressure Measurement Locations



Pressure Measurement Data

Zona Baja Oeste				No. : 2	
DATE: 2004/SEP/16 --- 2004/SEP/17					
LOCATION: RLINDA VISTA SUR.					
COORDENADAS: Este 575904 Norte 1343214 Elev.: 78 m					
MEASURED VALUE	Pressure	[MPa]	[psi]	* Average of Hourly variation	
	High	0.34	49.3		
	Average*	0.17	24.7		
	Low	0.04	5.8		

Hourly variation											[MPa]	
time	1	2	3	4	5	6	7	8	9	10	11	12
value	0.30	0.30	0.30	0.33	0.32	0.10	0.11	0.08	0.07	0.09	0.07	0.09
time	13	14	15	16	17	18	19	20	21	22	23	24
value	0.18	0.15	0.10	0.04	0.06	0.10	0.15	0.16	0.17	0.26	0.30	0.32

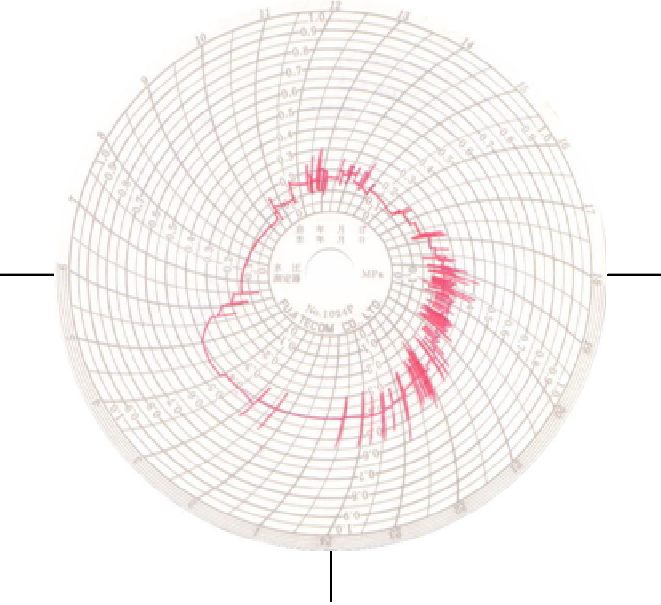


Note:

Pressure Measurement Data

Zona Baja Oeste				No. : 1	
DATE: 2004/SEP/16 --- 2004/SEP/17					
LOCATION: COLONIA MORAZAN					
COORDENADAS: Este 575910 Norte 1343976 Elev.: 62 m					
MEASURED VALUE	Pressure	[MPa]	[psi]	* Average of Hourly variation	
	High	0.43	62.4		
	Average*	0.25	36.3		
	Low	0.06	8.7		

Hourly variation												[MPa]
time	1	2	3	4	5	6	7	8	9	10	11	12
value	0.40	0.40	0.43	0.43	0.40	0.25	0.14	0.10	0.08	0.07	0.10	0.16
time	13	14	15	16	17	18	19	20	21	22	23	24
value	0.20	0.19	0.15	0.12	0.15	0.20	0.27	0.29	0.28	0.36	0.39	0.41



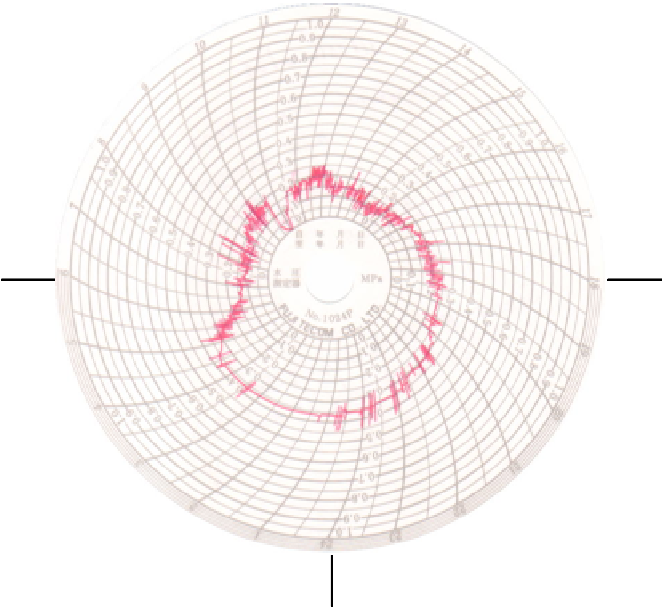
Note:

Pressure Measurement Data

Zona Baja Centro				No. : 4	
DATE: 2004/OCT/11 --- 2004/OCT/12					
LOCATION: Barrio 19 de JULIO C,SER					
COORDENADAS: Este 579537 Norte 1342553 Elev. 147 m					
MEASURED VALUE	Pressure	[MPa]	[psi]		
	High	0.37	53.7		
	Average*	0.22	31.9		
	Low	0.00	0.0		

* Average of Hourly variation

Hourly variation											[MPa]	
time	1	2	3	4	5	6	7	8	9	10	11	12
value	0.36	0.36	0.36	0.36	0.31	0.19	0.14	0.13	0.14	0.18	0.00	0.15
time	13	14	15	16	17	18	19	20	21	22	23	24
value	0.22	0.15	0.09	0.13	0.15	0.19	0.20	0.24	0.25	0.30	0.34	0.35



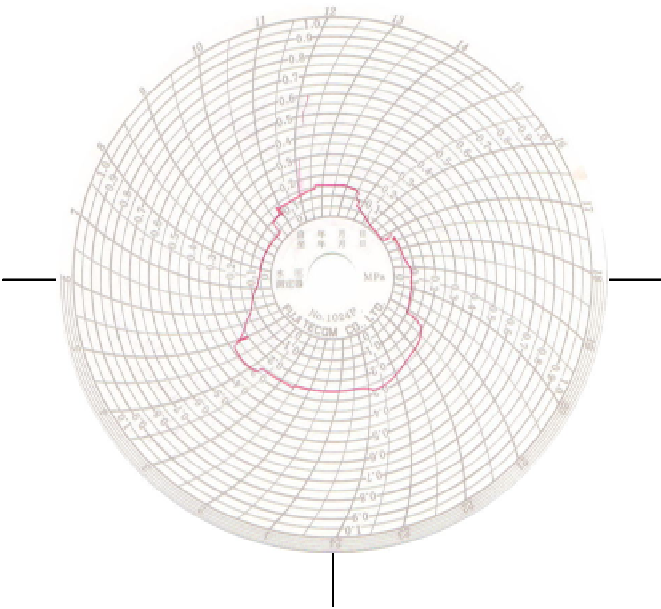
Note:

Pressure Measurement Data

Zona Baja Oeste				No. : 3	
DATE: 2004/SEP/16 --- 2004/SEP/17					
LOCATION: Monseñor LEZCANO					
COORDENADAS: Este 576429 Norte 1342903 Elev.: 81 m					
MEASURED VALUE	Pressure	[MPa]	[psi]		
	High	0.30	43.5		
	Average*	0.14	20.3		
	Low	0.00	0.0		

* Average of Hourly variation

Hourly variation												[MPa]
time	1	2	3	4	5	6	7	8	9	10	11	12
value	0.25	0.25	0.26	0.29	0.24	0.12	0.07	0.05	0.05	0.04	0.13	0.13
time	13	14	15	16	17	18	19	20	21	22	23	24
value	0.15	0.15	0.06	0.01	0.00	0.06	0.08	0.09	0.10	0.23	0.26	0.27



Note: