

Fecha: 28-12-17	Responsable de la Medición: E.M/Fur
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I. INFORMACIÓN DEL ÁREA

Código Punto: PT-UI	Corregimiento / Ciudad: Arraijan / Hacienda Hato Morúa
Job Number (equipo): 04	Distancia Explosivos (N/A no aplica):
Proyecto: ESTA Estudios complementarios - Patio y Talleros	
Coordenadas del Punto de Medición: 638883 / 985277	DATUM: WGS 84
Referencias de Ubicación Punto de Medición: N/A en la zona Sur de Arraijan - Chorro de Potreros (PT)	

II. INFORMACIÓN PUNTO DE MEDICION (Marcar las que apliquen y mostrarlas en croquis)

Superficie: ☐ Suelo ☐ Asfalto / Concreto	3-Edif. Residenciales (> 1 planta) ☐	6-Edif/Res Históricos ☐
Colindantes 20m:		
Sin estructuras ☐	4-Edif. Comerciales (> 1 planta) ☐	7-Comercios (1 Planta) ☐
1-Vialidad ☐	5-Hotel/Asilo/Escuela ☐	8-Puentes: ☐
2-Residencias (1 planta) ☒	9-Otros: <i>Residencia de empleados de la Hacienda</i>	

III. INFORMACIÓN DE PREPARACIÓN DEL INSTRUMENTO DE MEDICIÓN (Marcar las que Apliquen)

Verificación Batería:	☒	Verificación Hora/Fecha:	☒	Verificación Sensores:	☒
Verificación Memoria:	☒	Excavación 10 cm:	☒	Micrófono en Soporte:	☒
Verificación Programación:	☒	Nivelación del Geófono:	☒	Bolsa Arena:	☒

IV. INFORMACIÓN / RESULTADOS

TIEMPO		
Hora Inicial:	Tiempo de medición:	Resultado Final:
10:54 am	15 min	2.91 mm/s 7.8 Hz

V. OBSERVACIONES (FUENTES DE VIBRACIONES / OTRAS)

VI. CROQUIS (usos cercanos 20m con numeración Punto II)

66 treros
futura area de
pax 40 y taller

puntalmente

2 2 2

Construida a la Hacienda Hato Montez

Histogram Start Time 10:54:50 December 28, 2017
Histogram Finish Time 11:13:23 December 28, 2017
Number of Intervals 1.00 at 15 minutes
Range Geo:31.75 mm/s
Sample Rate 1024sps
Job Number: 4

Serial Number BE20277 V 10.72-8.17 MiniMate Plus
Battery Level 6.3 Volts
Unit Calibration December 20, 2017 by Instantel
File Name V277H7TS.ZE0

Notes

Location:
 Client:
 User Name: URS Holdings
 General:

Extended Notes

Punto PT-V1

Microphone Linear Weighting
PSPL 5.000 pa.(L) on December 28, 2017 at 11:09:50
ZC Freq >100 Hz
Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

	Tran	Vert	Long	
PPV	2.905	1.714	2.349	mm/s
ZC Freq	7.8	73	47	Hz
Date	Dec 28 /17	Dec 28 /17	Dec 28 /17	
Time	11:09:50	11:09:50	11:09:50	
Sensor Check	Passed	Passed	Passed	
Frequency	7.4	7.6	7.5	Hz
Overswing Ratio	3.6	3.3	3.9	

Peak Vector Sum 3.469 mm/s on December 28, 2017 at 11:09:50



Time Scale: 15 minutes /div **Amplitude Scale:** Geo: 0.500 mm/s/div Mic: 5.000 pa.(L)/div

Sensor Check

Fecha: 27/Dic/2017	Responsable de la Medición: EM/JC/FM
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I. INFORMACIÓN DEL ÁREA

Código Punto: PT-V2	Corregimiento / Ciudad: ANAÍSAÑ / JUAN DOMESTÓVEZ A. HATO MONTAÑA
Job Number (equipo): 02	Distancia Explosivos (N/A no aplica): N/A
Proyecto: ESIA PATIOS Y TALLERES LINEA 3 METRO	
Coordenadas del Punto de Medición: 639112 // 986535	DATUM: WGS 84
Referencias de Ubicación Punto de Medición: BARRIADA BRISAS DE ANAÍSAÑ	

II. INFORMACIÓN PUNTO DE MEDICION (Marcar las que apliquen y mostrarlas en croquis)

Superficie: ☐ Suelo ☒ Asfalto / Concreto	3-Edif. Residenciales (> 1 planta) ☐	6-Edif/Res Históricos ☐
Colindantes 20m: Sin estructuras ☐	4-Edif. Comerciales (> 1 planta) ☐	7-Comercios (1 Planta) ☐
1-Vialidad ☒	5-Hotel/Asilo/Escuela ☐	8-Puentes: ☐
2-Residencias (1 planta) ☒	9-Otros: ☐	

III. INFORMACIÓN DE PREPARACIÓN DEL INSTRUMENTO DE MEDICIÓN (Marcar las que Apliquen)

Verificación Batería: ☒	Verificación Hora/Fecha: ☒	Verificación Sensores: ☒
Verificación Memoria: ☒	Excavación 10 cm: ☐	Micrófono en Soporte: ☐
Verificación Programación: ☒	Nivelación del Geófono: ☐	Bolsa Arena: ☒

IV. INFORMACIÓN / RESULTADOS

TIEMPO		
Hora Inicial: 11:37 AM	Tiempo de medición: 15 MIN	Resultado Final: 0.079 mm/s 85 Hz

V. OBSERVACIONES (FUENTES DE VIBRACIONES / OTRAS)

PASO DE VEHÍCULOS EN CARRETERA PANAMERICANA Y BARRIADA

VI. CROQUIS (usos cercanos 20m con numeración Punto II)

Histogram Start Time 11:31:47 December 27, 2017
Histogram Finish Time 11:49:12 December 27, 2017
Number of Intervals 1.00 at 15 minutes
Range Geo:31.75 mm/s
Sample Rate 1024sps
Job Number: 2

Serial Number BE20277 V 10.72-8.17 MiniMate Plus
Battery Level 6.3 Volts
Unit Calibration December 20, 2017 by Instantel
File Name V277H7S0.0Z0

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Notes

Location:
 Client:
 User Name: URS Holdings
 General:

Post Event Notes

EslA Cat II. Patios y Talleres Línea 3 Metro de Panamá

Extended Notes

Punto PT-V2

Microphone Linear Weighting
PSPL 0.500 pa.(L) on December 27, 2017 at 11:46:47
ZC Freq >100 Hz
Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

	Tran	Vert	Long	
PPV	0.063	0.079	0.079	mm/s
ZC Freq	>100	85	>100	Hz
Date	Dec 27 /17	Dec 27 /17	Dec 27 /17	
Time	11:46:47	11:46:47	11:46:47	
Sensor Check	Passed	Passed	Passed	
Frequency	7.4	7.6	7.6	Hz
Overswing Ratio	3.6	3.3	3.8	

Peak Vector Sum 0.094 mm/s on December 27, 2017 at 11:46:47



Time Scale: 15 minutes /div **Amplitude Scale:** Geo: 0.200 mm/s/div Mic: 5.000 pa.(L)/div

Sensor Check

Calibration Certificate

Part Number: 714A9701

Description: TRIAXIAL GEOPHONE (ISEE)

Serial Number: BG19429

Calibration Date: December 20, 2017

Calibration Equipment: 714J7401

Instantel certifies that the above product was calibrated in accordance with the applicable Instantel procedures. These procedures are part of a quality system that is designed to assure that the product listed above meets or exceeds Instantel specifications

Instantel further certifies that the measurement instruments used during the calibration of this product are traceable to the National Institute of Standards and Technology; or National Research Council of Canada. Evidence of traceability is on file at Instantel and is available upon request.

The environment in which this product was calibrated is maintained within the operating specifications of the instrument.

Please note that the sensor check function is intended to check that the sensors are connected to the unit, installed in the proper orientation and sufficiently level to operate properly. This function should not be confused with a formal calibration, which requires the sensors be checked against a reference that is traceable to a known standard. Instantel recommends that products be returned to Instantel or an authorized service and calibration facility for annual calibration.

Calibrated By: _____

Li Pan

 **Instantel**

Calibration Certificate

Part Number: 716A0403

Description: MINIMATE PLUS W/EXT. GEO

Serial Number: BE20277

Calibration Date: December 20, 2017

Calibration Equipment: 718A1501

Instantel certifies that the above product was calibrated in accordance with the applicable Instantel procedures. These procedures are part of a quality system that is designed to assure that the product listed above meets or exceeds Instantel specifications

Instantel further certifies that the measurement instruments used during the calibration of this product are traceable to the National Institute of Standards and Technology; or National Research Council of Canada. Evidence of traceability is on file at Instantel and is available upon request.

The environment in which this product was calibrated is maintained within the operating specifications of the instrument.

Please note that the sensor check function is intended to check that the sensors are connected to the unit, installed in the proper orientation and sufficiently level to operate properly. This function should not be confused with a formal calibration, which requires the sensors be checked against a reference that is traceable to a known standard. Instantel recommends that products be returned to Instantel or an authorized service and calibration facility for annual calibration.

Calibrated By: _____

Li Pan

 **Instantel**