

Station Notes for BUY1, marmabuy1btr2014

Latitude:	40.8399 N(WGS 84)
Longitude:	29.1231 W (WGS 84)
Elevation:	47 m
Install Depth:	95 m
Orientations:	CH0=231, CH1=171, CH2=111, CH3=81
Install Date:	2014 August 26
GTSM Technologies #:	US89
Executive Process Software:	Version 1.14
Logger Software:	Version 2.01.0
Home Page:	http://www.unavco.org/instrumentation/networks/status/pbo/overview/BUY1
Notes Last Updated:	April 27, 2020

·Install depth is from the top of the casing to the bottom of the strainmeter.

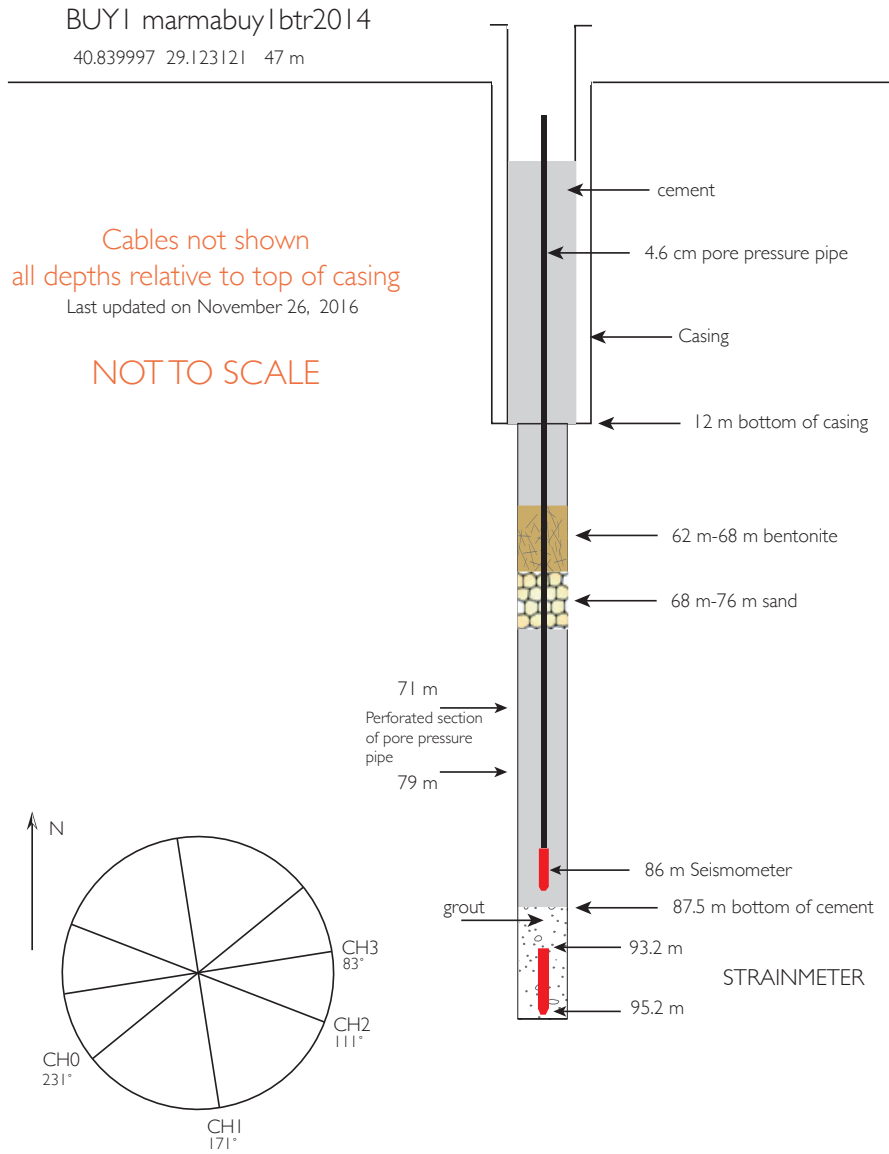
·Orientations are in degrees East of North.



Location of BUY1

Instrumentation at Strainmeter

Instrument	Units	Bottle/ASCII Scale Factor	SEED Scale Factor
Pore Pressure	Hecto Pascals		
GTSM Barometer	Kilopascals	1.0	0.0001
Rain Gauge	Millimeters/hour	1.0	0.252
Down hole Temperature Sensor	Degrees Celsius	1.0	0.0001
Logger Temperature Sensor	Degrees Celsius	1.0	0.0001
Setra Barometer	Hecto Pascals	None Installed	



1. Installation notes

August 26,2016

Successfully installed GTSM US89 at 95.2 m. Used MF1341 grout, water content 1.88 gal/bag. Cable was laid out and instrument was lowered by hand. It was left running during the install.

Compass test

Pre-install

X min 2.449 X max 3.049

Y min 2.045 Y max 2.684

Final numbers

X 2.494 Y 2.625

August 27,2016

Prepared for seismometer install. Glueed PVC for pore pressure into 4 m sections. Switched rig from good sand line to disposable one.

August 28,2016

Installed seismometer 163 at a depth of 86 m. 1.8" PVC was attached to seismometer and installed for pore pressure at the same time. Seismometer and PVC were lowered on steel cable, as the PVC used for pore pressure was not threaded and we had concerns about it's load-bearing capacity. In lieu of screen sections, 8 m of the PVC was perforated by the drillers with a 3/32" drill bit. The screen section is from 71 m - 79 m.

Seismometer test results:

V - 2.499 kOhm

H1 - 2.520 kOhm

H2 - 2.480 kOhm

Grout was tagged with seismometer at 87.5 m, which is 25 ft of grout plus instrument. This is a little higher than normal (~18') but hole diameter is smaller (5.7") which accounts for part of this.

August 29,2016

Tremie pipe finally arrived. 1.25" schedule 80 w/ fine threads, 30 x 3 m sections. Pumped 5 x 50 kg bags of cement at ~8 gal / bag (7gal/94# bag equivalent) using the drillers mud pump. Target cement level is 76 m.

August 30,2016

Tagged cement at 76 m. Add 205 kg sand (sorted for ~1mm grain size) by pouring down tremie with water. Sand plug is 67.75 m - 76 m. Unable to attain coated bentonite pellets, so mix ~35 gal of bentonite (powder+water) in 55 gal drum. Pour down tremie to try and create a seal between sand and cement.

Estimated bentonite plug ~ 6 m. Cemented borehole until cement was visible at the surface. Checked pore pressure pipe after cementing, it still appears connected to the aquifer (water level drops as it is added). Pore pressure sensor will be installed when station is completed.

2. General Information

- This station is part of the GONAF network in Turkey.

3. Strainmeter Maintenance

- October 14, 2018 – Wade visited the site to repair lightning damage. Replaced backplane on GTSM due to lightning damage. Replaced oscillator board, RT board, and logger board.
- April 20, 2020 – Reset system clock to current time. Was 100 sec slow.