# Station Notes for B935, dinsmr935bcn2008

Latitude: 40.4787 (WGS 84)
Longitude: -123.5732 (WGS 84)
Elevation: 696.7m / 2286 ft
Install Depth: 158.2 m / 519 ft

Orientations: CH0=263.1, CH1=203.1, CH2=143.1, CH3=113.1

Install Date: October 28, 2008

GTSM Technologies #: US80

Executive Process Software: Version 1.14 Logger Software: Version 2.02.2

Home Page: www.unavco.org/instrumentation/networks/status/nota/overview/B935

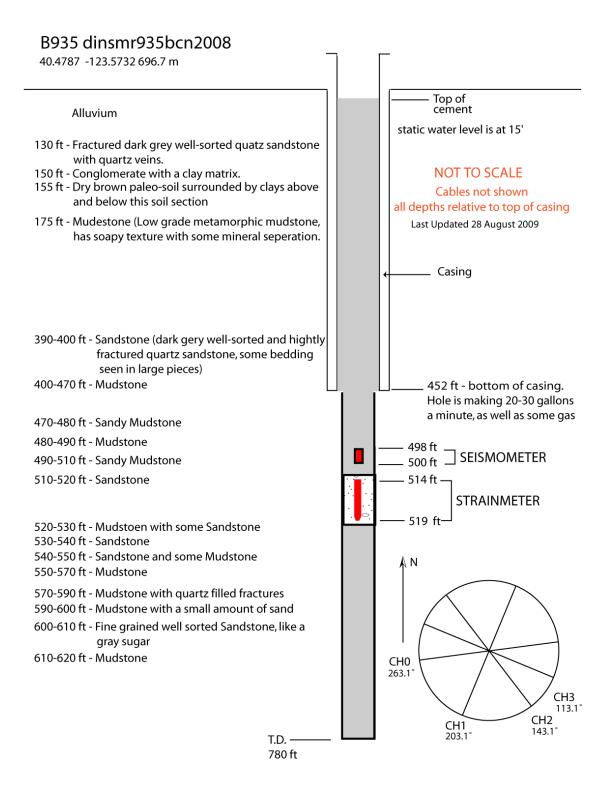
Notes Last Updated: April 24, 2020

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

<sup>2</sup>Orientations are in degrees East of North.



Mendocino PBO strainmeters, October, 2008. Green dots represent boreholes that only have a seismometer.



# **Instrumentation at Strainmeter**

| Instrument                   | Units            | Bottle/ASCII Scale Factor | SEED Scale Factor |
|------------------------------|------------------|---------------------------|-------------------|
| Pore Pressure                | Hecto Pascals    | None Installed            |                   |
| 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    | 1.0                       | 1.42925E-04       |

#### 1. Installation notes

October 28, 2008

- 15:00 Onsite, set up equipment. Pull test data off Strainmeter.
- 18:30 Mix one small batch of grout with distilled water, and one with well water, to see if water chemistry has any effect on grout.
- 19:20 Samples look the same.
- 19:39 Begin mix.
- 19:42 Last bag of grout added.
- 19:47 Last water added, for a total of 9 gallons plus 32 oz water.
- 19:54 Fill dump bailer.
- 19:58 Dump bailer going down.
- 20:02 Dump bailer on bottom.
- 20:05 Dump bailer out of grout.
- 20:07 Dump bailer out of hole.
- 20:09 Strainmeter going down.
- 20:23 Strainmeter at 519' and turned on.
- 20:33 Called good.
- 22:15 Off site.

October 29, 2008

Seismometer installed at ~500'.

## 2. General Information

- Sensitivities of all EH channels corrected in the dataless on March 4, 2010.
- The site did not have GPS time between March 2011 and March 2012. The drift observed in the tidal phases during this time are due to the bad time.
- 6-8 water quality/water level test wells were installed between Nov. 1 and Nov. 15, 2013 on some land about 300 yards from the station. The wells are 20-25 ft deep.

### 3. Strainmeter Maintenance

• November 11, 2008 – At roughly 17:00 UTC Liz Van Boskirk and Brennan O'Neil visited the site. The Q330 GPS antenna was added to the site, and the timer was set to go off at 2:02 local time and come back on at 2:05.

- March 19, 2009 The logger software was upgraded from 1.16 to the correct version of 2.02.2 that matches the compact flash size.
- June 6, 2009 Liz VonBoskirk visited the site from 13:30 to 15:40 local time. The RT firmware was upgraded to version 1.20 and the quadrature was adjusted. A Setra barometer was also installed.
- January 20, 1010 The Marmot was rebooted between 12:00 to 13:00 PT. The GTSM quadrature was adjusted. CH0 and CH3 were almost in phase, while CH1 and CH2 were off phase by roughly > 2/3.
- March 3, 2011 Temporary broadband seismometer deployed, and borehole seismometer metadata collected with the Birddog.
- March 21, 2012 Marmot was rebooted.
- March 27, 2012 A broadband seismometer, marmot and Q330 were temporarily deployed at the site. The seismometer will be used to orient the borehole seismometer.
- March 28, 2012 Swapped power box due to GPS timing issue. The station time was ~269 seconds fast at the time of the swap. The station timing is now good.
- March 5, 2013 Chad visited the site and checked the rain gauge.
- January 10, 2014 Station had non-compatible breaker in the circuit panel. It shorted out several times and was no longer providing reliable power to the equipment. Adam Woolace swapped the non-compatible "Cutler Hammer" type breaker with a compatible Siemens type "QP" 20 amp breaker.
- March 20, 2014 SOH plots show consistent 11.5 A input. 150 watt surplus is due to configuration error. Edited the strain-logger.conf file to enable the coil current sensor.
- May 28, 2014 VSAT modem was hung. Power cycling the timer and IDU brought the station back online.
- July 13, 2015 Removed VSAT IDU and replaced it with a Verizon DCMA.
- October 6, 2015 Removed Proxicast LC2 and modem and replaced it with an LS300. Added 5-port switch.
- September 11, 2018 Removed 8 batteries and added 6. Strainmeter has 4 and RT board has 2. Cleaned the clogged rain gauge.
- March 27, 2019 RV50 upgrade, installed 4G red bull antenna. CH0 and CH3 were in G2 upon arrival. Adjusted chop and quads. CH2 could not remove all quadrature, seemed like pot 2 was not working (got better adjusting pot 1 to minimum, but turning pot 2 up did nothing). Other channels get better, all at G3 when Mike left.

April 9, 2020 – Visited site after a bunch of Verizon RV50's mysteriously dropped offline.
 All of the outages were simultaneous and it was determined that a site visit was necessary. I rebooted the modem and upgraded to the latest firmware. 4.13. I verified station was online before leaving.