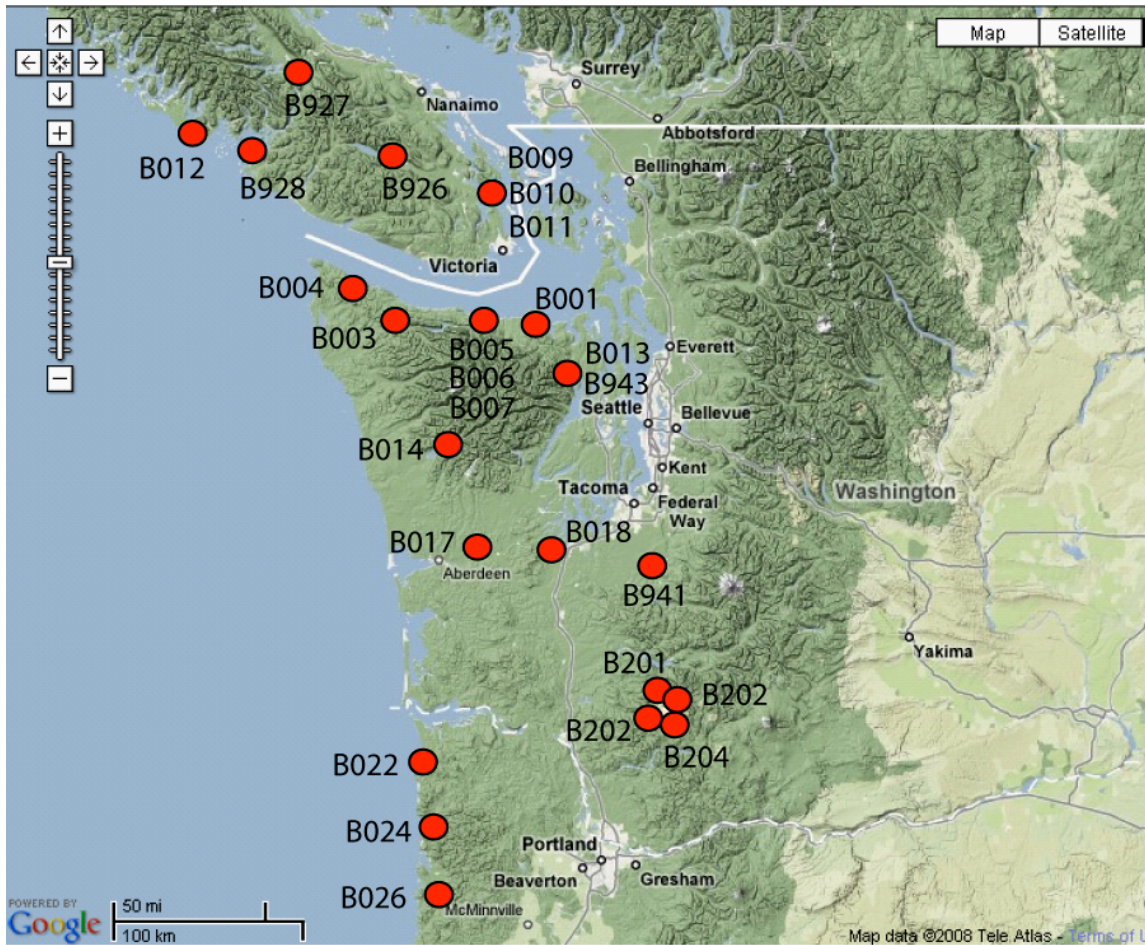


Station Notes for B941, kapows941bwa2008

Latitude:	46.9868 (WGS 84)
Longitude:	-122.219 (WGS 84)
Elevation:	151 m / 495 ft
Install Depth: ¹	153 m / 502 ft
Orientations: ²	CH0=281.3, CH1=221.3, CH2=161.3, CH3=131.3
Install Date:	March 18, 2008
GTSM Technologies #:	US43
Executive Process Software:	Version 1.14
Logger Software:	Version 2.02.2
Home Page:	http://pbo.unavco.org/station/overview/B941
Notes Last Updated:	October 1, 2018

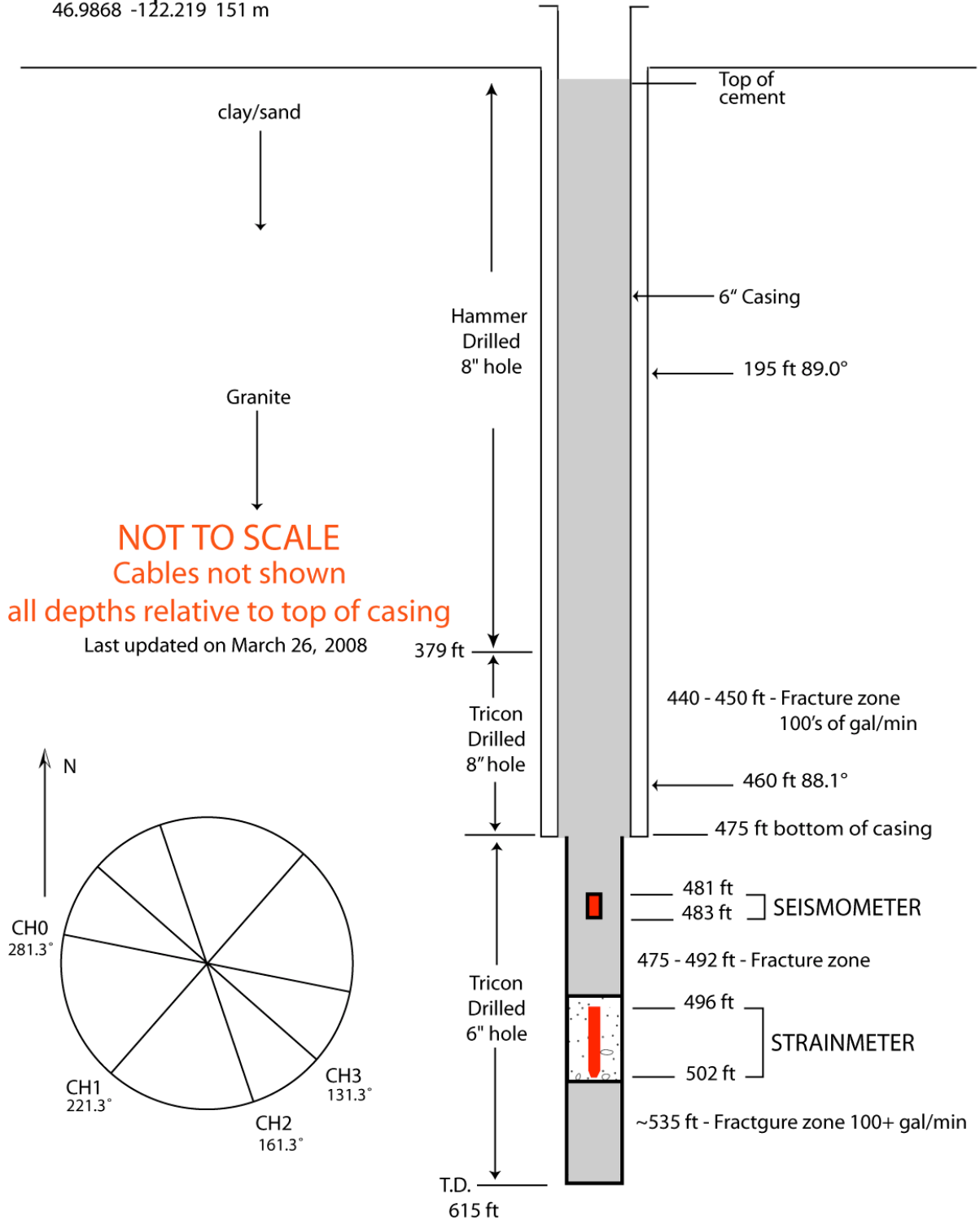
¹Install depth is from the top of the casing to the bottom of the strainmeter.

²Orientations are in degrees East of North.



Pacific Northwest PBO strainmeter network, March 26, 2008

B941 kapows941bwa2008
46.9868 -122.219 151 m



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	None Installed	

1. Installation notes

March, 17 2008

Arrive onsite and set up US43.

March 18, 2008 UTC

15:30 - Onsite.

15:47 - Reboot GTSM (can't get USB port to work).

16:20 - FTP data off strainmeter due to broken USB port on GTSM.

16:30 - Data look good.

18:15 - Compass test, X: 1.687 2.136, Y: 1.624 2.077.

18:40 - Mix PENN grout.

18:59 - Dump bailer going down.

19:08 - Dump bailer on bottom.

19:11 - Dump bailer out of grout.

19:40 - GTSM on bottom, at 502'. There were some problems with capstan controls which slowed the install.

20:00 - Call good, clean up site.

22:00 - Off site.

March 19, 2008 UTC

17:30 - Onsite. Strainmeter looks good, test seismometer #119.

19:00 - Lower seismometer.

19:30 - Trip in pipe.

20:05 - Cement arrives.

20:10 - Pipe on bottom at 488', seismometer at 483'.

20:20 - Pumping cement.

21:15 - Surface return.

21:30 - Clean up, work on cable pit. Korey picks up excavator.

00:40 - Leave site.

March 24, 2008 UTC

Installed the enclosure and electronics rack. Strainmeter was shut down at 17:00 UTC and turned back on at 23:00 UTC.

2. General Information

- Sensitivities of all EH channels corrected in the dataless on March 4, 2010.

3. Strainmeter Maintenance

- April 21, 2008 – Wade Johnson visited the site fix the Fiber optic modem.
20:00 - Onsite. Discovered that that blue 4 port fiber optic modem is not showing a connect light to GTSM fiber optic modem. The modem also didn't show a connect light to the other components, even though Wade could connect to then through it. Pulled modem and replaced it with a White 4 port Fiber optic modem.
20:10 - Comms up. Q330 was in a weird mode. System light was switching between green and red, and no other lights were on. Power cycled Q330 and it returned to normal.
20:20 - Offsite.
- August 14, 2009 – Korey Dausz upgraded the firmware on RT channels 0, 1, and 2. Channel 3 would not let him reset if after changing the configuration. He tried power-cycling the RT board. He checked the serial cable connection, and tried restarting his computer several times. He switched the RT3 Channel board with a spare and was able to upgrade the new board to 1.20 firmware.
- February 17, 2011 – Temporary broadband seismometer deployed, and borehole seismometer metadata collected with the Birddog.
- July 18, 2012 – A temporary broadband seismometer was deployed.
- July 20, 2012 – The 4-port F.O. data port was replaced, as the one at the site was the older model. All site equipment was documented for DIMS. Site has a blackberry bush beginning to grow in the way of the enclosure doors. Liz removed what was needed to access the site. The bush should be pushed back next winter. The broadband seismometer was removed.
- September 13, 2012 – The VSAT receive was at 77 and the cross-pole was failing at 56%. Liz re-pointed the dish with receive now at 81% (highest it reached was 82%) and cross-pole in the mid 70's. After adjusting the dish she attempted to use the force ranging, but there was an error message. She went through the set-up successfully until it wanted to re-direct her to a new browser screen, with the message of an un-trusted encryption. She rebooted the IDU, but there was no change. Trying a new cable did not change anything. She spoke with Wade about the issues, and will replace the ODU tomorrow.
- September 14, 2012 - Liz replaced the horn (transmit) on the ODU. The receive signal was boosted up to 91%. The IDU system status changed to green and the site comms were restored. She re-terminated all cable ends.
- September 18, 2012 – Liz updated the logger software to version 2.02.2, and applied the GPS cold star command. The site is tracking satellites again. The upgrade caused offsets in the down hole temperature, power box temperature, and logger temperature.
- November 7, 2013 – Restarted GTSM.
- November 8, 2013 – Adjusted chops and quads, trapped down all equipment, and replaced the logger board.

- January 30, 2014 – Liz remotely upgraded the logger firmware to 2.02.2.
- August 19-20, 2014 – Clear brush and remove yellow jackets. Tried to get VSAT working.
- August 21, 2014 – Swapped IDU and ODU. Re-terminate the old cable ends. Replaced VSAT cable and power inverter.
- June 30, 2015 – Site was offline after IP migration. Could ping everything from within the site, including the outside router new IP and IDU new IP. However, Liz cannot surf the web while connected to the IDU. Tried power cycling both the IDU and router multiple times. No change. Re-registered IDU, no change. Cross-pole (71) and Receive (91) percentages were good. Issue is either on Hughes end or the IDU needs to be replaced.
- July 28, 2015 – VSAT failure during IP migration. Error on Hughes side. Never corrected. Removed IDU and router. Replaced with LS300.
- July 28, 2016 – Logged onto CDMA. Always "connecting to Verizon service" but never connecting. Rebooted and power cycled 3-4 times with no change. Tried a different cable to red bull antenna. Tried placing red bull antenna higher and leaving alone for 15 minutes to see if it would find and lock onto a signal. Left when it was still "connecting".
- Sept 1, 2016 – Removed LS300, Replaced with RV50.
- November 23, 2016 – Swapped out 10 batteries with 8. 4 for the GTSM battery bank and 4 for the main battery bank. Documented resistance and capacitance of down hole GTSM.
- January 31, 2017 – Power cycled Marmot.
- August 23, 2018 – On-site. Marmot was powered. Could not connect to Marmot through Ethernet, swapped out Marmot. Could ping and log on within site through the new Marmot. Installed Setra. Had to power down and remove Q330 to open Sensor port. Adjusted chops and quads. CH0 was not a sine wave, but a block. Power cycling the RT board did not fix the issue. Power cycled Oscillator board and CH0 returned to a sine wave. All CH were easily adjusted with only minor changes.