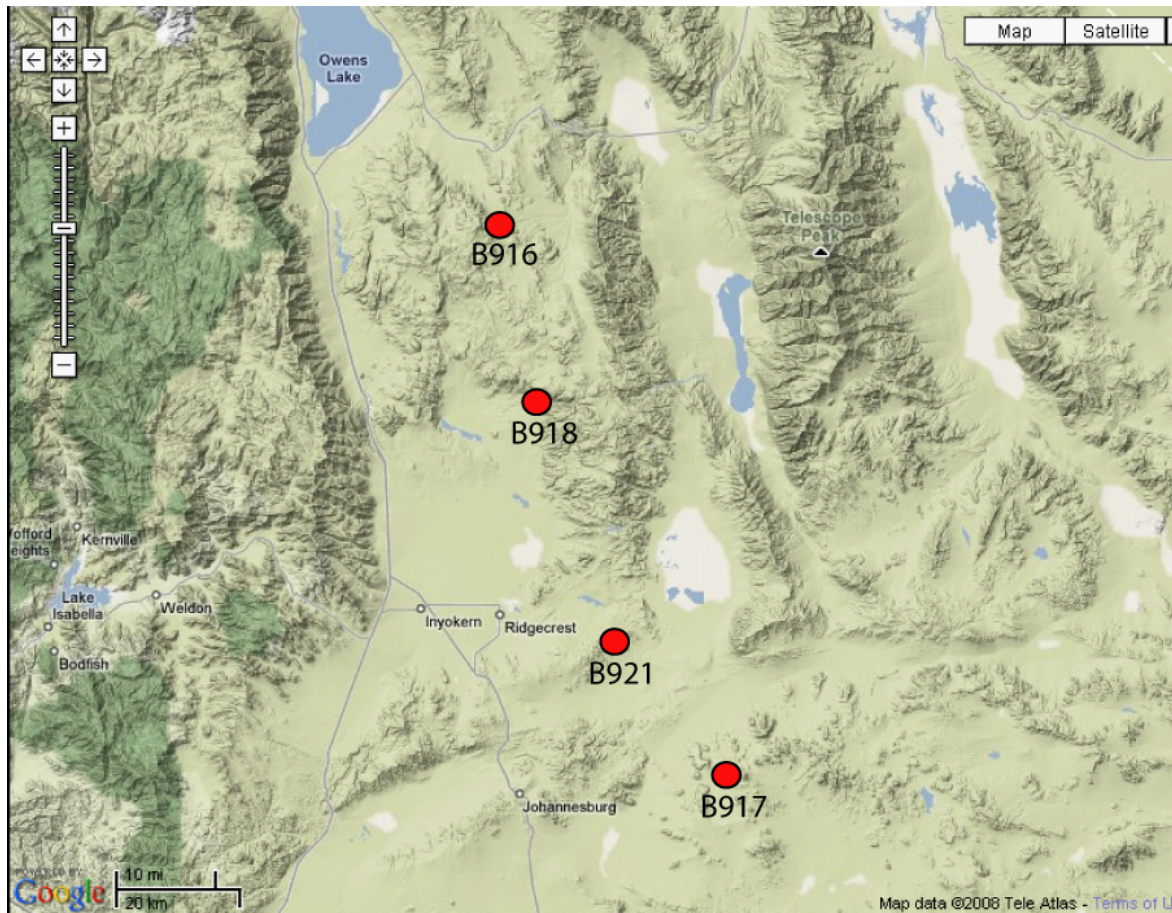


Station Notes for B921, randsb921bcs2008

Latitude:	35.5865 (WGS 84)
Longitude:	-117.4622 (WGS 84)
Elevation:	694.5 m / 2279 ft
Install Depth: ¹	139.9 m / 483.5 ft
Orientations: ²	CH0=340.5, CH1=280.5, CH2=220.5, CH3=190.5
Install Date:	June 3, 2008
GTSM Technologies #:	US66
Executive Process Software:	Version 1.14
Logger Software:	Version 2.02.2
Home Page:	www.unavco.org/instrumentation/networks/status/nota/overview/B921
Notes Last Updated:	March 30, 2019

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

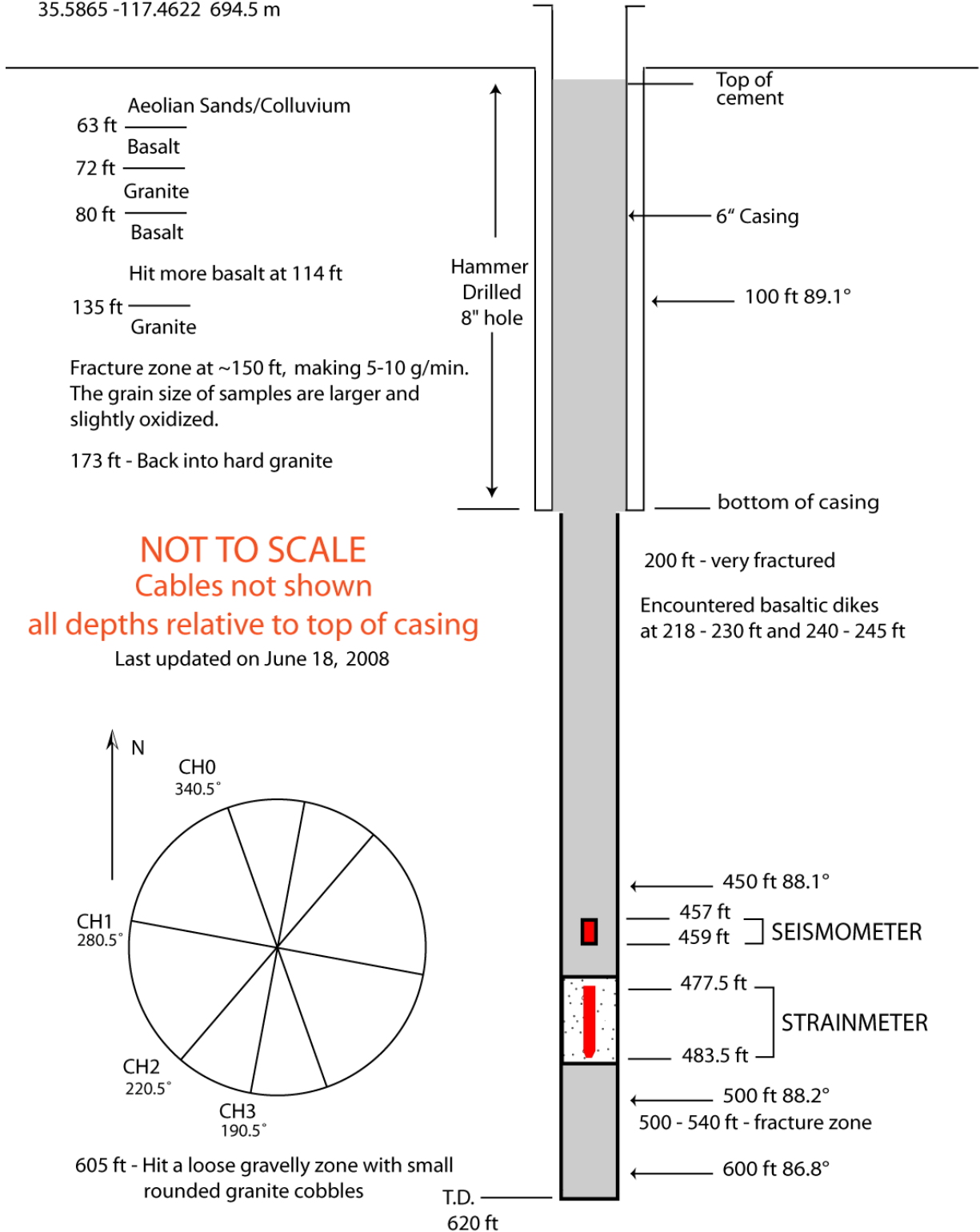
²Orientations are in degrees East of North.



Mojave strainmeter network, July 31, 2008

B921 randsb921bcs2008

35.5865 -117.4622 694.5 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	1.0	1.42925E-04

1. Installation notes

June 3, 2008 UTC

14:30 - On site, 90 deg, breezy and dry.
14:55 - Shutdown GTSM US66.
15:15 - Sound hole, total depth = 485'3" from top of casing.
15:30 - Compass test: Xmin 1.009 Xmax 2.007 Ymin0.924 Ymax 1.888.
15:54 - Start 10 bag mix of PennGrout batch #Am805.
16:01 - Last grout added.
16:05 - Last distilled water added (final amount is 5.07 qts/sack). Mix for 5 min, one minute settle, mix for two more minutes.
16:13 - Stop mix.
16:20 - Bailer at total depth.
16:28 - Lower GTSM.
16:35 - GTSM at target depth of 483.5'.
16:39 - GTSM turned on, looks good, very warm.
16:47 - Rename B921.
16:48 - Compass X =1.724 Y=1.732.
16:50 - Shutdown logger to adjust downhole temperature, set TP7 to 1.031v.

June 4, 2008 UTC

14:30 - On site, get H2O and replace stolen seismometer.
Seis # 98.
v - 2.493 kohm
h1 - 2/459 kohm
h2 - 2.473 kohm
Lower seismometer to 459' and trip in tremi pipe. Tag grout at 465', 20' of grout plus strainmeter.
19:45 - Start pumping cement.
22:00 - Finish pumping.
22:30 - Attempt to pull data from GTSM and discover logger board in a "hung process", probably from the renaming of the instrument. As such, it is not possible to log into the instrument or pull any data. Decide to replace logger US66 with US69.
22:40 - Shutdown GTSM
22:50 - GTSM turned on with Logger US69, renamed B921.
The rest of afternoon spent setting up solar infrastructure, installing VSAT post and pouring form.
02:00 - Off site.

June 5, 2008 UTC

15:00 - At China Lake visitor center getting new badges.

15:30 - Onsite, install solar mounts, setup uphole electronics racks, and point VSAT.
 16:57 - GTSM turned off.
 19:15 - GTSM on inside hut.
 21:34 - Configure Cisco router.
 21:40 - Program marmot.
 21:44 - Program Q330.
 22:14 - Shutdown logger for downhole temperature adjustment, set to 1.024 V on TP7.
 22:56 - Test rain gauge, good to go.
 23:00 - Begin packing up and cleaning up site, mob equipment to B Mountain.
 00:30 - Off site.

2. General Information

- Strainmeter installed on China Lake Navel Base.
- Replaced logger US66 with US69 on June 4, 2008.
- Sensitivities of all EH channels corrected on March 4, 2010.

3. Strainmeter Maintenance

- June 20, 2008
 Reason for site visit: cisco router is down
 17:45 (UTC) - On site, jiggle router, comes back online
 18:00 - Decide to swap for new cisco as there were problems with original router during install.
 18:45 - New cisco in place, site back online.
- December 1, 2008 – Failed Powerbox was replaced.
- January 12, 2009 – Mike Gottlieb installed a Setra barometer.
- March 21, 2009 – Upgraded logger software to 2.02.2
- July 28, 2009 – RT board firmware upgrade to 1.20. The solar charge controller seems to have failed. When Mike arrived onsite it had a solid red light and was not charging the batteries, despite 19 V coming off the solar panels. It started working while he was onsite, but then quickly went down again.
- July 30, 2009 – Mike replaced the C60 charge controller, and power situation moderately improved, but the site continued to charge poorly. While onsite the coms were up, but the batteries were hovering between 12.8 and 13 V, despite almost 40 amps continuously flowing into 6 batteries. The batteries should be tested/replaced if the site continues to go offline. It appears that the strainmeter continued running throughout the duration of this problem.
- November 6, 2009 – Mike Gottlieb visited the site to build a 5' x 8' roof over the electronics enclosure. He also moved the rain gage and adjusted the quadrature.
- January 14, 2010 – Replaced all 10 batteries.

- April 14, 2010 – Mike Gottlieb installed a datalogger to measure currents and voltages on mains side of station. He found that the coms LVD was shutting off at 12.6V, which was too high. He reset the LVD on April 16 to shut off at 12.1 V, which so far seems to have resolved the coms outage problem. Minimum battery voltages overnight have been consistently 12.4-12.5 V. Will need to track voltages over the next winter to confirm that data collection does not become jeopardized during shorter days.
- July 13, 2010 – Removed the datataker DT80 data logger that had been deployed at this station. This required cutting power to the coms and mains. GTSM power was not interrupted.
- January 24, 2011 – Temporary broadband seismometer deployed, and borehole seismometer metadata collected with the Birddog. Replaced the battery jumpers with 4 gage wire, and set quads and chop.
- January 25, 2011 – Lock and remove broadband seismometer.
- April 6, 2012 – Power charge controller upgraded to Morningstar PPT. Set quads and chop on GTSM. The sheet roofing had blown off the sunshade, it was replaced.
- March 14, 2019 – Site was off line. VSAT and 4 port switch had failed. Replaced VSAT, 4 port switch, and cisco.
- Jan 20, 2020 – Replaced 831 with EdgeRouter. VPN was up but there are some firewall issues. Re-aimed VSAT. Couldn't get signal strength above 51 but ACP was 75. Navy was doing electronics warfare testing near site so may have been causing interference. Tuned GTSM.