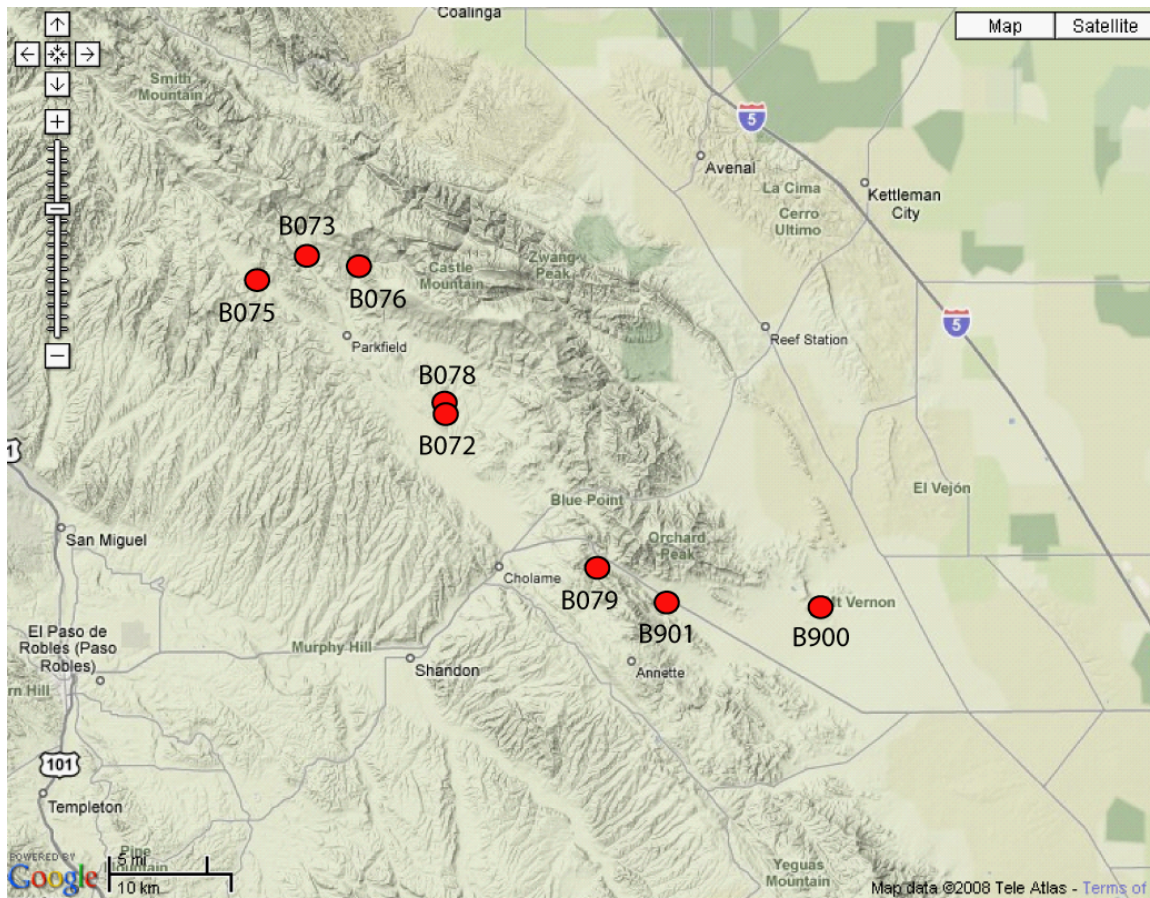


Station Notes for B075, Flengte Flats, flengt075bcs2006

Latitude:	35.9292 (WGS 84)
Longitude:	-120.5153 (WGS 84)
Elevation:	583 m / 1913 ft
Install Depth:	170.5 m / 561 ft
Orientations:	CH0=321.9, CH1=261.9, CH2=201.9, CH3=171.9
Install Date:	13 October 2006
GTSM Technologies #:	US20
Executive Process Software:	Version 1.14
Logger Software:	Version 2.02.2
Home Page:	www.unavco.org/instrumentation/networks/status/nota/overview/B075
Notes Last Updated:	August 1, 2020

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

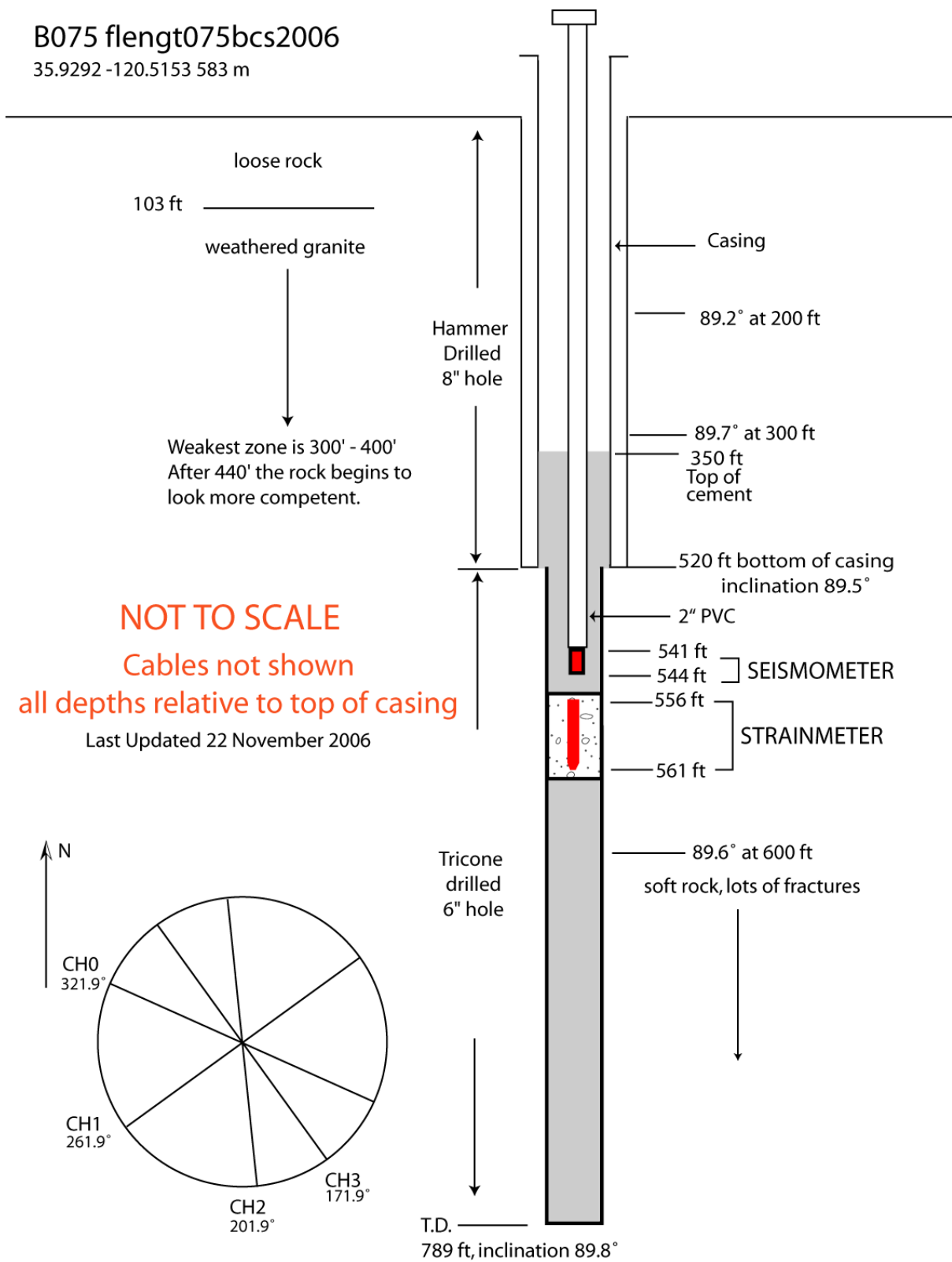
·Orientations are in degrees East of North.



Parkfield PBO strainmeter network, July, 2008

B075 flengt075bcs2006

35.9292 -120.5153 583 m



Instrumentation at Strainmeter

Instrument	Units	Bottle/ASCII Scale Factor	SEED Scale Factor
Pore Pressure	Hecto Pascals	N/A	N/A
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	1.42937E-04

1. Installation notes

B075 is located a half mile to the west of Slacks Canyon Road. The site was drilled into soft sandstone. The site was drilled to 800 ft but was losing hole when we logged it. We decided to fill the hole back up to the casing and re-drill to a target location at 760 ft. The cement sat for two weeks. When the hole was re-drilled the hole began to deviate from the cement at 565-580 ft. It was then decided to cement the hole back up to 560 and install there. Nothing unusual occurred during the install.

2. General Information

- Operator logs show that the logger entered standby, then restarted almost every day from October 24 to November 30, 2006.
- Operator logs show that the environmental door has never been closed.
- Logger did not pick up GPS time until 12 January 2007.
- All four gauges were still in extension four weeks after installation.
- This strainmeter is co-located with the GPS station P790.
- Sensitivities of all EH channels corrected on March 4, 2010

3. Strainmeter Maintenance

- 17 November 2006
Wade Johnson and Alan visited the site they “retrofitted the GTSM charging system with Flex chargers and also tested the wiring of the seismometers.”
Fri Nov 17 12:22:06 2006 Entering Standby
Fri Nov 17 16:33:42 2006 Logger Started
Fri Nov 17 16:33:42 2006 Environmental door is open.
- December 5, 2006
Mike Gottlieb visited the site at 11:10 PST.
- 17 December 2006 - Michael Hasting visited the site to test and check the power system. “The site had a few problems with the solar power but it is now fixed and should return a higher rate of data as the batteries will now get fully charged.”
- 18 December 2006 - Michael Hasting updated the RT firmware to 1.17 and the GPS to 135_309.s3 at B075. There is a problem with the GPS in that it took the upgrade but he could not connect to it with his laptop to verify that it was working. He repeated the firmware

upgrade without a problem but still could not talk to the software. The GTSM is reporting that it is recording the 1PPS but has yet to update the location in the status report and give a GPS Invalid message. This may require a replacement power box to fix, which he did not have with him at that time. Still no valid time stamp.

- 12 January 2007 – Michael Hasting replaced the power box US20PB with replacement US300PB, now getting GPS timing. Adjusted downhole temp, checked battery terminals, and cleaned off solar panels.
- 4 February 2007 – Michael Hasting replaced the DW7000 with a DW6000. He checked the batteries and such at the site and all looks good. He also did a quick adjustment on the amp-op setting of the GTSM21.
- 30 March 2007 – Michael Hasting moved all 9 solar panels over to the Xantrex charge controller. He installed the DC/DC converter and hooked up the GTSM to this. As of 15:00 local time the GTSM was showing 1.9amps of charge. The configuration is 8 primary batteries and 4 GTSM batteries.
- October 2 & 5, 2007 – Warren Gallaher visited the site to perform some maintenance. The power box was adjusted for proper charge voltage. Also the quadrature and delay were set. A Marmot was also installed. The solar regulator was found to be causing radiated noise on the GTSM system. As a temporary solution one set of solar panels was hooked directly to the GTSM power box and the wires were re-routed to provide physical separation. 2 of the 8 batteries from the communications equipment were moved to the GTSM to provide more backup power.
- August 26, 2008
GPS station P790 were co-located at this site today and yesterday. They share the existing VSAT and Cisco routers with the strainmeter.
- March 19, 2009 – Logger software upgraded from 1.15 to the correct version of 2.02.2 that matches the compact flash size.
- May 3, 2009 – Setra barometer added to site.
- July 19, 2009 – Andre Basset visited the site after the station failed to come back up after the Hughes VSAT migration. The Cisco router and VSAT units were power cycled. The VSAT came back online with the correct new IP address but the Cisco did not. With Warren's help, the Cisco Router IP was changed.
- August 2, 2009 – All RT boards were upgraded to firmware 1.20, and the quadrature was adjusted.
- August 27, 2009 - Marmot was powered off and on in coordination with tests performed for W. G., which involved turning all equipment off for 30 minutes and documenting the time on the GTSM.
- February 18, 2010 – Liz VonBoskirk visited the site to replace the Marmot and fiber optic modems.

- June 15, 2010 - There were some issues with antelope. On visiting the site, the Marmot was first power cycled and Otina was called to see if there were any changes in Antelope. There were still error messages so the Marmot was then replaced. After a second call to Otina, Antelope is working properly again.
- July 17, 2010 - After opening the door on the enclosure the LVD's were making a clicking noise. The red light was on, on the solar regulator. The regulator may be over heating and shutting off instead of charging the batteries. This site needs a new solar regulator and LVD's.
- August 18, 2010 - The Solar Controller and LVD had overheated. The entire panel was replaced due to the bad solar controller and LVD. All electronics were rewired, including the seismometer. The 4 batteries to the GTSM were replaced. The old ones had 6+ V.
- September 22, 2010 – All batteries were replaced, 8 for the main battery bank and 4 to the strainmeter. The NetRS was also replaced. The GTSM was turned on and will be monitored since the batteries were not receiving a charge.
- September 24, 2010 – Checked the voltages and current for wiring on the panel from the Solar Controller to the GTSM. Voltages were correct throughout the system, but there was no current. The Panel was then correctly re-wired so that the GTSM batteries will now charge.
- October 29, 2010 – A broadband seismometer, marmot and Q330 were temporarily deployed at the site. The seismometer will be used to orient the borehole seismometer.
- November 16, 2010 – Both the main bank and GTSM batteries were rewired so that each bank (of four) has the negative (black wire) attached on one end of the bank and the positive (red wire) attached to the other end of the bank. One battery was added to the GTSM battery bank, making it a bank of four.
- August 18, 2011 – Power system upgraded. Replaced 10AWG battery jumpers with 4AWG battery jumpers.
- December 22, 2011 – Upgraded power system. Added Tristar MPPT solar controller.
- ~April 15, 2013 – The station documentation was completed. The LVD settings were checked and adjusted. Data flow from this site had been a little slower than others in the area. It turned out that the comms at this site were turning off earlier and turning back on later than preferred.
- August 6, 2014 – Adjusted LVD settings. Swapped the CH0 RT board and upgraded firmware to 1.20. Adjusted quads and chops.
- December 3, 2014 – The power system at the site is having problems due to the cloudy weather in the area, resulting in none of the batteries being charged fully. Batteries are old and need to be replaced.
- December 19, 2014 – Replaced the VSAT IDU , ODU and cable.

- February 25, 2015 – Swapped mains and GTSM batteries. Installed new VSAT cable and conduit. The old cable was damaged in several spots.
- March 31, 2016 – Measured resistance and capacitance on all four GTSM channels.
- June 21, 2017 – GTSM was in event mode on arrival, and CH3 was in G1. Adjusted quad/chop, CH3 was non-responsive. Tested equipment with dummy cell. Changed strain-logger.conf event triggers. CH1 data review shows that data quality has degraded starting ~6/17/17.
- April 10, 2018 – Checked data quality. CH0 and CH2 looked good. CH3 showed no signal/response from DH. CH1 had a real signal, but amp O/P signal was very unstable in gain 2 and 3. Chopped amp i/p signal, which is a sign of partial downhole failure. All channels looked good with dummy load. Station had bad gps time, no gps pulse on channels. Replace power box, which fixed the timing issue. Removed 70 hPa offset in pressure data by correcting PRESSURE_OFFSET.
- June 26, 2020 – Station had been offline since Jan 20, 2020. Found that VSAT IDU was not working properly. Also noticed that the battery breaker on the backpanel was flipped. Replaced the VSAT IDU and restored connectivity, but the site likely needs fresh batteries as well. The GPS receiver was offline and not logging data during nighttime. The fiber optic switch had also failed. Doerte did not have a replacement, so the Q330, Marmot, GPS receiver and charge controller were plugged directly into the Cisco instead. Downloaded data from the GTSM.