by Carl Helmers

This is an article that I wrote and posted in 2009. In 2016 while repopulating my site in its WordPress format I first found it in its original form via the internet archive. I hunted through my personal hard drives to find its source text. Here is a 2016 mostly stylistically updated version similar to my newer articles . . . *CH* *2016.03.26*

A Drive to Mount St. Helens

by Carl Helmers

In 2009, Jean and her scientific colleagues' International Narcotic Research Conference (INRC) was held in the city of Portland, Oregon in early July. As in the past, I accompanied Jean. Portland is a city that I had never personally visited in my past travels for my ***BYTE*** magazine in the late 1970's or with my subsequent Helmers Publishing Inc. controlled circulation engineering and computer application magazines of the 1980's and 1990's. Since I had never been there, I was enthusiastic about visiting a new city. I also enthusiastically anticipated – as long as I would be in Portland – perhaps renting a car and taking a side trip to the nearby Cascades volcano Mount St. Helens in the state of Washington. This prospect takes me back to memories of my ***BYTE*** magazine days.

Even in the pre-internet age of 1980, I kept track of events and happenings. I had been fascinated for several months by reading news in current magazines and viewing current TV news reports about the magma stirrings and earthquakes that were starting to take place under the volcano Mount St. Helens. The weeks prior to the 1980 NCC (National Computer Conference) *Personal Computer Festival* brought a stream of television news of the volcanic events in southern Washington State. Mount St. Helens finally erupted in all its fury at 08:32 PDT on May 18, 1980.

I had reason to worry about Mount St. Helens even though the NCC show was held that year in Anaheim, California many hundreds of miles to the South. I had just completed a quick East-West *yo-yo* of a trip to Victoria, British Columbia Canada (North American West Coast time zone) then Ottawa (North American Eastern time) Canada to present my "standard" ***BYTE*** era talk on *Personal Computing Futurism* to computer groups in those Canadian venues on May 12 and 13. This was a tight travel schedule I will probably never take again.

I do not have perfect recall by any means. I just have my "paper pilot" ***Week At A Glance*** calendar book for 1980 ☺>. This is a style of standard calendar book that I still purchase and use every year. Since at least 1999 I have facetiously called such books my *paper pilot*s in a crude pun on the name of one of the first PDA products, the *Palm Pilot*. My hard copy collection over the years provides an impromptu not necessarily complete contemporaneous log of what I did when going back many years – including 1980. When writing this piece I also found a couple of airline ticket stubs that I saved in my personal 1980 ***BYTE*** NCC trip's hanging file folder.

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After a couple of nights at home in New Hampshire resting from my Canadian speaking trips, I headed to the West Coast yet again on May 17, 1980, the day before Mount St. Helens erupted in all its fury. That May 1980 *NCC Personal Computer Festival* trip was one of my last trips as Editor of ***BYTE*** magazine. It was also one of the last such NCC shows before COMDEX took over that trade show niche as personal computing grew to dominate much of the computer industry through the 1980s. Mount St. Helens of course came to be the talk of myself and my ***BYTE*** editorial colleagues in addition to the particular latest greatest personal computers of that pre-PC, pre-Macintosh era. One of my ***BYTE*** editorial colleagues at the time who recently confirms the armchair volcanologist editorial preoccupations of our 1980 NCC show trip is Interactive Analytics Inc.'s co-owner Mark Dahmke, then a fairly recent graduate of the University of Nebraska - Lincoln *Computer Science* program. We hired Mark to work for ***BYTE*** after he graduated. We had published several of Mark's articles while he was a student.

Back to July 2009 in Portland Oregon...

Due to International Narcotic Research Conference (INRC) business that occupied Jean who is an official of the organization, she was unable to break away and accompany me on the trip to Mount St. Helens while the 2009 conference was taking place. Jean suggested that Brian Knapp – Jean's Technical Associate in her University of Rochester Medical Center research lab – join me on the drive as navigator. Brian traveled to the Portland INRC 2009 as a co-author of a poster paper about his work that he presented Tuesday.

Portland is a little over 100 miles by road from Mount St. Helens to the northeast in the state of Washington. On Tuesday July 14 2009, I arranged a rental car for Wednesday morning at a nearby Dollar car rental agency. On that bright sunny (said to be exceptional for Portland) Wednesday July 15 morning, after breakfast Brian and I walked the 5 city blocks from the Benson Hotel INRC 2009 venue to the rental agency. By 08:49 PDT [“TIME OUT” stamped on my car rental contract for the day] I had rented the car and we began our drive. As navigator, Brian consulted the rental agency's Portland area map and my hand copied Google maps driving directions.

I have not yet yielded to the entreaties of my gadget freak friends to acquired a hand held GPS. So I made do with on line WWW research and hard copy notes from the night before. The roads would not change over night short of another geological cataclysm ☺>

2016 update: Only a few years later, I finally have a rarely used GPS on my person all the time in the form an “ap” on my Samsung cell phone. These cell phones long ago replaced land lines for Jean and I. GPS is but one of a plethora of “aps” to choose from in this 21st century evolution of personal computing and connectivity.

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We headed out of Portland on Interstate 405 North. Within a mile or so, Interstate 405 North merged into Interstate 5 North and we drove across the Willamette River in Portland. A few miles further north, Interstate 5 North crosses the much wider Columbia River (the Willamette is its tributary) into Washington State.

According to Google Maps which gave me the route and directions to what is now the Johnston Ridge National Volcanic Observatory [http://www.fs.fed.us/gpnf/mshnvm/] the estimated mileage is 109 miles starting from that Dollar brand car rental agency at 132 NW Broadway in Portland. The first 55 miles was a typical uneventful post rush hour Interstate highway drive North from Portland.

On the Spirit Lake Highway

At Interstate 5 North exit 49, we took this second Castle Rock exit to get on WA-504, the *Spirit Lake Highway* headed east to Mount St. Helens. This country highway threads its way some 52 miles, ultimately reaching a turn off for the entrance road to the Johnston Ridge National Volcanic Observatory. Along the way, the views from the *Spirit Lake Highway* were frequently quite spectacular.

In the three decades since Mount St. Helens erupted, this country highway obviously had major improvements like roads everywhere. WA 504 – the *Spirit Lake Highway* – is now a fairly low traffic, well designed two lane mostly 50 and 55mph road heading up into the rugged wooded country terrain. Like highways in NH where I lived for 25 years, this highway is largely an access highway for logging trucks of the forest products industries in the area. But instead of glacial sand and solid granite of NH, the hillsides were clearly volcanic ash and rocks consolidated from same.

by Carl Helmers

We soon caught our first hint that Mount St. Helens might actually be near: a signature logging company greeting sign of the area:

No, this was not a sign warning about blasting for highway construction in progress ☺>

As we traveled further along the road above the river valley, perhaps 20 or 30 miles from Interstate 5 we caught our first glimpses of what we thought might be Mount St. Helens ahead and to the right in the distance. At 10:26 PDT we stopped at a narrow emergency pullout by the right side of the road, with an informal wire fenced overlook. Stepping on a short post near the fence, I captured this first image of Mount St. Helens in the distance:

by Carl Helmers

A Volcanic Mud Flow Rest Stop

We continued to drive up the forested and hilly *Spirit Lake Highway* to the Johnston Ridge National Volcanic Observatory at Mount St. Helens. Off to our right at the bottom of the steep hillside, we started seeing the dried up evidence of the hot cataclysmic mud/ash flow from the erupting volcano nearly 3 decades ago. The river was quite a distance down a very steep slope into which the highway had been cut. The bottom of the river valley is a wide dried mud plane with the river's stream, flowing at its center.

Eventually, we stopped at a USDA Forest Service tourist vista/overlook with substantial parking area and rest stop / gift shop. This was not yet the Johnston Ridge National Volcanic Observatory, but a substantial building anyway. As befits a USDA Forest Service tourist stop and parking lot, there were spectacular and good views of Mount St. Helens in the distance and the river valley with its dried up volcanic mud flow.

by Carl Helmers

Pointing the camera directly to the right of the previous image gave me this good view of the continuation of the volcanic mud flow filling the wide valley:

In the static images I captured it is easy to get the impression of a wide, active flowing muddy river. But quite the contrary: Even at the considerable distance from the river from our viewpoint, the "flow" was quite frozen and static – a three decade old relic of that actual hot and raging volcanic mud flow that had lost momentum and settled in place in the valley.

I asked Brian to capture this image of me pointing in the general direction of Mount St. Helens in the distance, with the hardened mud flow at the bottom of the valley at the right side here:

This was getting more and more interesting as we kept getting closer views of the volcano. Back on the road, after maybe a half hour we came to the entrance road for the Johnston Ridge National Volcanic Observatory and left WA 504 for the final few miles to our goal of the drive.
I parked the car in the ultimate USDA Forest Service parking lot. We walked up the paved path to the observatory itself. We soon passed by this sign and notice board on the path with a general map of the area:

by Carl Helmers

Continuing on up the hillside, we arrived at the actual observatory on the ridge with the volcano in the distance across a still devastated valley. The observatory building is a substantial structure, built into the hillside as if designed to withstand future pyroclastic flows from Mount St. Helens like the one which took the life of volcanologist Dr. David Johnston – completely cleaning off the ridge from which he had been observing the mountain that morning in 1980.

In the intervening decades after Mount St. Helens erupted in 1980 the powers that be subsequently renamed the ridge posthumously in Dr. Johnston's honor. According to information I read on line or at the Johnston Ridge observatory, months before the eruption Dr. David Johnston was author or co-author of at least one published paper in a peer-reviewed scientific journal predicting exactly the kind of landslide-induced eruption that actually happened. Dr. Johnston's prediction was at odds with prevailing opinion at the time of most of his seasoned volcanologist colleagues.

In the 1980 event, Mount St. Helens erupted exactly as David Johnston had predicted – earthquakes from magma moving up in the mountain caused the whole fragile volcanic side of the mountain facing Johnston Ridge to fall off in a massive landslide, releasing pressure and initiating the violent eruption process. Dr. Johnston's fatal mistake was being on his now eponymous ridge watching the mountain 6 miles away, too close when the eruption actually happened!

Even now in 2009, Dr. David Johnston's pioneering thoughts on eruption hazards still apply. In the September 17 2009 on line *Nature* news, I found a note about the possible uncapping of these fragile, frozen volcanic peaks world wide in a warming world – http://www.nature.com/news/2009/090917/full/news.2009.926.html. [**WARNING**: To read beyond a short open summary of the article at this link to the proprietary *Nature* site requires a current subscription.] This leads to the potential of a natural geological feedback mechanism: a warmer world melts ice caps on volcanic mountains yielding more eruptions → leading to more volcano-sourced sulfate aerosols in the atmosphere → yielding more reflection of solar energy. Ultimately this might start to quench anthropogenic induced global warming, leading naturally to a cooler world – independent of any volcanic impacts on people in cities world wide! In particular, I worry about another spectacular Cascade volcano Mount Rainier and the adjacent urban complex of Seattle-Tacoma, Washington.

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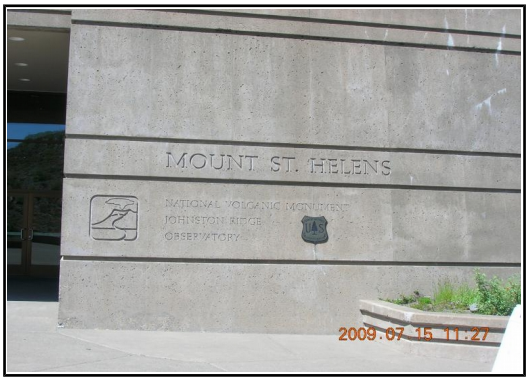
Mount St. Helens
National Volcanic Monument
Johnston Ridge Observatory

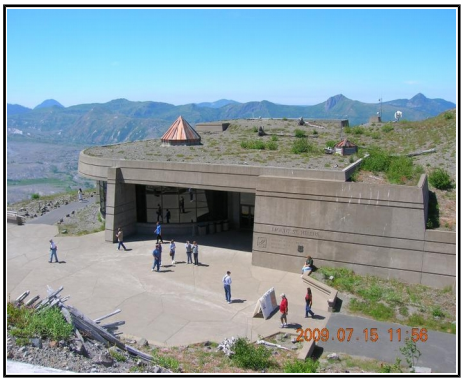
Eventually we reached the wide plaza in front of the present day Johnston Ridge Observatory from which I captured this image of the side of the building:



The door of the tourist shop/observatory museum/display area is at the left edge of this closeup image I captured of lettering and symbols barely visible in the next image captured from a viewpoint across the plaza much higher and further away.

by Carl Helmers

After paying a nominal access donation and climbing a long winding paved footpath opposite the entrance, I captured this image of the observatory building facade to show the full ambiance of the observatory plaza against the clear blue sky and mountain ridge line across the valley in back of it:



Inside the large door of the observatory building is a public hall with lots of excellent teaching displays and readouts of instrumentation such as seismometers monitoring the mountain's continuing volcanism. This hall intended for visitors is but a fraction of the much larger area of labs and offices for scientists and technicians. As I mentioned earlier, the building seems intended as a bunker against pyroclastic flows from the next Mount St. Helens eruption, whenever it may occur as the mountain eventually rebuilds itself to its former much taller classic volcanic cone.

Mount St. Helens clearly needs some cone rebuilding. What was a classic snow and ice covered volcanic cone before the May 1980 landslide and eruption ever since has been a truncated and much lower partial cone at best. To be sure, according to news items I read from time to time in *Nature* and *Science* and on their web sites, the cycle continues as a new cone starts forming in the center of the old one.

The entire side of the mountain slid away along the line of site from Johnston ridge to its former peak a few thousand feet higher than than the present highest point. I captured this next image of the truncated mountain by turning around from the observatory and plaza direction:

by Carl Helmers

One of my favorite images captured at the Johnston Ridge National Volcanic Observatory is this, which I call “The Sentinel of Johnston Ridge.” This is a tree that could be a 30 year pine tree that is visible from the plaza of the observatory and can be captured with the remains of the former cone of Mount St. Helens centered on it in the distance. This image makes a great “wallpaper” image choice for my PC's desktop…

I never found the story of this lone pine tree. Was its location a work of nature, or was it a human contrivance? Its size (i.e. age) suggests that its seed germinated around the time that Mount St. Helens erupted in 1980. I can easily imagine scenarios about its history.

An obvious first thought is: did the USDA Forest Service folks who caused the observatory to be built decide to place a pine tree in this obvious tourist image position? Given all the resources that went into improving access roads and building the observatory, it would be a low incremental cost to cause a suitably aged pine tree to be planted at the time the observatory was built. Then there are other conceivable histories.

As a mere seedling at the the time of the eruption, this tree could have by chance been preserved through the blast to continue growing in the spot we see today – then carefully protected in place through the construction of the observatory.

Was this a tree that survived the blast after just germinating that spring, to push out its first sprout after the blast – a sort of romantic symbol of the tenacity of life in spite of the disasters that nature sent its way that took all its more mature nearby plant brethren?

Was this a tree that subsequently germinated after the blast, from a pine cone blasted off Mount St. Helens and carried the 6 miles across the valley to the point where we see it?
Who knows? Maybe the actual history of this tree is totally different from my limited scope of imagined scenarios...

by Carl Helmers

After completing our visit to the *Mount St. Helens National Volcanic Monument* ***Johnston Ridge Observatory***, Brian and I headed back to Portland. On our way out, we passed the inverse of that first formal sign we saw on the *Spirit Lake Highway*:

This sign serves as a sort of closing bracket to this story of our drive see Mount St. Helens, Washington on July 15, 2009.

A_Drive_To_Mount_St._Helens.odt
September 27, 2009
cosmetically reworked March 26, 2016