



VOLCANIC AND SEISMIC ACTIVITY AT MOUNT ST. HELENS - 1983
U.S. Geological Survey and University of Washington
Vancouver and Seattle, Washington

Formal statements released in 1983

Compiled by Bobbie Myers, 2005

1983

January –

February – *includes Volcano Advisories and Alerts and February 7 dome-building eruption with minor explosions and lahars (note: dome growth continued for almost a year)*

March – *includes Volcano Advisories*

April – *includes Information Statement Update*

May – *includes Information Statement Update*

June –

July –

August – *includes Information Statement Update*

September – *includes Information Statement Update*

October – *includes Volcano Advisories*

November –

December – *includes a supplement to “daily update”*

JANUARY 1983

VOLCANIC AND SEISMIC ACTIVITY AT MOUNT ST. HELENS

U.S. Geological Survey and University of Washington
Vancouver and Seattle, Washington

Report at 11:00 a.m., Tuesday, January 04, 1983

Seismicity, gas and deformation at background levels.

Report at 10:00 a.m, Wednesday, January 05, 1983

Seismicity, gas and deformation at background levels. Inclement weather prevented crews from getting to the mountain yesterday, January 4, 1983.

Report at 9:30 a.m., Thursday, January 06, 1983

Seismicity, gas and deformation at background levels. Inclement weather prevented crews from getting to the mountain yesterday, January 5, 1983.

Report at 11:20 a.m., Friday, January 07, 1983

Seismicity, gas and deformation at background levels. Inclement weather prevented crews from getting to the mountain yesterday, January 6, 1983. WRD crews continued to monitor high water associated with the past few storms.

Report at 11:00 a.m., Tuesday, January 11, 1983

Seismicity, gas and deformation at background levels. Inclement weather prevented crews from getting to the mountain yesterday, January 10, 1983.

Report at 2:30 p.m., Wednesday, January 12, 1983

Seismicity, gas and deformation at background levels. Inclement weather prevented crews

from getting to the mountain yesterday, January 11, 1983.

Report at 10:30 a.m., Thursday, January 13, 1983

Seismicity, gas and deformation at background levels.

Report at 11:30 a.m., Friday, January 14, 1983

Seismicity, gas and deformation at background levels.

Report at 2:20 p.m., Monday, January 17, 1983

Seismicity, gas and deformation at background levels. Crews gained access to the mountain Friday and Saturday, January 14 and 15, 1983.

Report at 9:00 a.m., Tuesday, January 18, 1983

Seismicity, gas and deformation at background levels

Report at 12:00 a.m., Wednesday, January 19, 1983

Gas and deformation at background levels. Seismicity during Tuesday, January 18 rose to low levels.

Report at 11:06 a.m. Thursday, January 20, 1983

Seismicity remained at low levels for Wednesday, January 19. Gas has reported an increase to low level. Deformation crews were unable to get out due to poor weather.

Report at 2:00 p.m., Friday, January 21, 1983

Gas remains at low-level. However, seismicity returned to background level. Measurements

made yesterday indicate that deformation is still at background level.

Report at 3:30 p.m., Tuesday, January 25, 1983

Seismicity and deformation remain at background level. Gas levels were still elevated on January 21. No gas measurements have been made since then.

FEBRUARY 1983**VOLCANIC AND SEISMIC ACTIVITY AT MOUNT ST. HELENS**

U.S. Geological Survey and University of Washington
 Vancouver and Seattle, Washington

Report at 10:30 a.m., Wednesday, February 02, 1983

Seismicity and deformation remain at background level. WRD field crews worked around the mountain yesterday, Tuesday, February 1.

Report at 10:30 a.m., Friday, February 04, 1983

Yesterday February 3rd the following MSH Advisories were issued:

Mount St. Helens Advisory

February 3, 1983
 08:00 A.M.

Two small explosions occurred in the crater at Mount St. Helens at 11:39 PM (2/2/83) and 2:56 AM (2/3/83), sending steam plumes with small amounts of ash to approximately 20,000 feet. A pre-dawn flight (2/3/83) reported that one or both of these explosions melted snow on the east side of the crater, and generated a small mudflow. Field crews are enroute to the mountain to confirm this observation. These events are similar to small explosions or steam bursts in mid-December 1980, March-August 1981, and May-July 1982.

U.S. Geological Survey, Vancouver, WA
 University of Washington, Geophysics Program, Seattle, WA

Updated Advisory

February 3, 1983
 5:30 P.M.

Last night's steam bursts from the top of the dome spread a thin layer of ash over areas northwest of Mount St. Helens. They also caused a small snow and ice avalanche, melted some snow, and generated a small mudflow. A small amount of muddy water reached Spirit Lake, but it did not affect the debris dam or the pumping operation. A smaller steam burst at 3:44 PM today rose only to the crater rim. These events originate near the surface of the dome, are not preceded by significant seismicity or ground deformation, and do not pose serious hazards outside the crater.

U.S. Geological Survey, Vancouver, WA
 University of Washington, Geophysics Program, Seattle, WA

Current conditions: seismicity and deformation are at low levels as of 10:30 Friday Feb. 4,

1983. Crews are in the field today examining mudflows and tephra deposits.

Report at 12:30 p.m., Monday, February 07, 1983

Excellent weather on Friday, February 4 and Saturday, February 5 allowed crews into the field to measure gas emissions and ground deformation.

On Saturday, February 5, the following extended outlook advisory was issued:

Mount St. Helens
Extended Outlook Advisory

February 5, 1983
9:30 P.M.

Rates of seismic energy release, gas emission; and deformation of the dome and crater floor, and glow from the dome, have increased over the past week. If current trends continue, an eruption will begin within the next two weeks, likely within the next week. Relatively small explosions and rockfalls from the dome may also continue; they are of shallow origin and their relationship to the increase in seismicity; deformation, and gas emissions is not clear.

Several differences in the present precursors compared to those of recent eruptions suggests that this eruption may include some explosive activity along with dome growth; a lava flow (non-hazardous) is a less likely possibility. Any explosive activity may cause rapid snowmelt and mudflows that could flow into Spirit Lake or down the North Toutle. At present, we do not anticipate an eruption that would jeopardize the Spirit Lake impoundment.

U.S. Geological Survey, Vancouver, WA
University of Washington, Geophysics Program, Seattle, WA

Weather prevented crews from reaching the mountain on Sunday, February 6.

Note: The following Alert was issued on February 7, 1983 a few minutes after the update was issued.

*Mount St. Helens
Alert*

*February 7, 1983
12:40 PM, PST*

A new dome lobe has been reported by our aerial observer. Ground crews will attempt to confirm this report and determine more about what events may follow. No hazardous explosive activity has occurred as of this time.

*U.S. Geological Survey, Vancouver, WA
University of Washington, Geophysics Program, Seattle, WA*

Report at 10:30 a.m., Tuesday, February 8, 1983

A break between storms yesterday afternoon allowed access to the crater. At 12:15 PM aerial observers reported growth of a new lobe on the east side of the dome (within the slot created by the explosions the night of Feb. 2-3). Ground crews later confirmed this report.

Crews worked thru the afternoon measuring gas and deformation and installing telemetered tiltmeter.

At 4:37 PM a small gas burst produced a plume to 13,000 feet. This plume contained some ash which drifted to the NE.

On February 7 the following alert was issued:

Mount St. Helens
Updated Alert

February 7, 1983
8:30 P.M.

A new lobe is growing on the east side of the dome, from the site of the small explosions on the night of February 2-3. The short-term likelihood of significant explosive activity is now reduced, but it will be a few days or more before we can be confident that no significant explosions will occur. Minor explosions and rockfalls like those of the past several days may continue.

U.S. Geological Survey, Vancouver, WA
University of Washington, Geophysics Program, Seattle, WA

Another storm arrived late last night. Today, February 8, crews are on stand-by in case clouds break before tonight's storm hits.

Report at 12:00 p.m., Wednesday, February 09, 1983

Due to inclement weather crews were unable to access the crater on Tuesday, February 8, 1983. Seismicity remains at low level and consists mainly of avalanche type signals, with occasional small earthquakes.

Report at 11:00 a.m., Thursday, February 10, 1983

Due to inclement weather crews were unable to access the crater on Wednesday February 9, 1983, to observe the eruption in progress. Seismicity remains at low level and consists mainly of avalanche type signals, with occasional small earthquakes.

This morning at 10:00 AM, a fixed wing aircraft observed that the dome has grown since it was last observed on Monday February 7.

Report at 02:30 p.m., Friday, February 11, 1983

Clouds prevented crews from working in the crater on Thursday February 10, 1983. The clouds occasionally parted, allowing observers in the 'gas plane' and on the ground at Spirit Lake

to confirm that growth of the new lobe had continued. Seismicity remained at low level and consisted mainly of avalanche type signals, with occasional small earthquakes.

High winds prevented access to the crater today, Feb. 11. Crews on Harrys Ridge this morning were able to measure slow growth of the new lobe.

Report at 11:00 a.m., Monday, February 14, 1983

Crews were able to work at Harrys Ridge Friday, February 11, however, high winds prevented helicopters from entering the crater. Measurements from Harrys indicated the new lobe was still growing.

Storms kept crews from working in the crater over the weekend.

Report at 11:30 a.m., Wednesday, February 16, 1983

Crews were able to enter the crater Tuesday, February 15, however, poor visibility prevented any measurements on the new lobe.

Seismicity remained at low level and consisted mainly of avalanche type signals, with occasional small earthquakes.

Report at 3:30 p.m., Thursday, February 17, 1983

Due to inclement weather crews were unable to access the crater on Wednesday, February 16, 1983. Seismicity remained at low level and consisted mainly of avalanche type signals, with occasional small earthquakes.

Report at 1:15 p.m. Friday, February 18, 1983

Due to inclement weather crews were unable to access the crater on Thursday, February 17, 1983. Seismicity remained at low level and consisted mainly of avalanche type signals, with occasional small earthquakes.

Report at 10:00 a.m., Wednesday, February 23, 1983

Crews were able to access the crater on Monday February 21, 1983. Poor visibility prevented measurements of the new lobe, but points just north of the dome have moved only slightly since they were measured a week ago. Seismicity continues at the same low levels that it

has been at since last week. The Forest Service reopened the restricted zone Tuesday and the pump station has been reoccupied at Spirit Lake.

Report at 12:30 p.m., Friday, February 25, 1983

Crews were able to work in the crater for a few hours on Wednesday and to make a brief observation flight into the crater on Thursday. However, weather conditions continue to hamper needed observations and measurements. UW reports seismicity is now at background level.

A brief break between storms may allow access to the crater today, Friday, February 25. Crews will remain on weather stand-by over the weekend.

MARCH 1983**VOLCANIC AND SEISMIC ACTIVITY AT MOUNT ST. HELENS**

U.S. Geological Survey and University of Washington
 Vancouver and Seattle, Washington

Report at 11:30 a.m., Tuesday, March 1, 1983

Weather conditions allowed access to the crater on Monday. Crew were able to get a closer look at the 100 foot tall spine growing out of the new lobe. The spine was first observed on a brief helicopter flight into the crater last Thursday (Feb 24). Measurements indicate that deformation is continuing at a slow rate. UW reports seismicity is at background level.

Report at 12:00 a.m., Wednesday, March 2, 1983

Marginal weather conditions allowed minimal access to the crater on Tuesday. UW reports seismicity is a background level.

Tuesday, March 1, the following Eruption Advisory was issued:

Mount St. Helens
 Eruption Advisory

March 1, 1983
 3:30 PM

The February 1983 eruption can finally be considered over. Seismicity, ground deformation, and gas emissions have declined significantly from their levels early in this eruption. Although they have not returned to a completely quiet state, they are low enough and steady enough that we think they are the tail-end of this latest eruption, rather than an indication of renewed activity. Some further rockfalls and small ash emissions are likely, but these will not pose hazards outside the crater.

Report at 11:30 a.m., Friday, March 4, 1983

Crews were able to work around the mountain both Wednesday and Thursday. Measurements indicated that slight deformation of the dome is continuing. The spine (reported on 24 and 28 Feb.) is 60 meters high and is now the highest point on the dome.

Gas emissions have decreased slightly. Seismicity remains at background level.

A phreatic explosion occurred at 1158 a.m. on Thursday. The explosion dislodged 150 feet of bank along the Spirit Lake outlet channel at the west end of the Pumice Shelf (shelf is on north side of Pumice Pond) and produced a plume to 10,000 feet AGL. A smaller explosion occurred at 1334.

Report at 1:30 p.m., Monday, March 7, 1983

Crews were on standby all weekend. However, weather did not permit access to the field. Increases in seismic activity prompted the following advisory to be issue Sunday afternoon:

Mount St. Helens
Extended Outlook Advisory

March 6, 1983
4:00 PM PST

Seismicity is increasing once again, and is now at a rate like that observed in the early stages of buildup toward previous eruptions. Ground deformation may also be increasing, but poor weather has prevented a clear determination of the rates. Early changes in both seismicity and deformation are like those observed before predominantly non-explosive dome growth. We will issue a prediction if seismicity continues to increase and/or if an increase in rates of ground deformation can be confirmed.

Report at 1:30 p.m., Wednesday, March 9, 1983

Continuation of the trend in seismic activity prompted the following advisory to be issue Tuesday afternoon:

Mount St. Helens
Updated extended outlook advisory

March 8, 1983
3:00 PM PST

Current rates of seismicity suggest that art eruption will begin sometime within the next three weeks. Poor weather continues to prevent ground deformation measurements that would aid in making a more precise estimate of when the expected eruption will begin. We will update this prediction if warranted by changes in the pattern of seismicity or by deformation measurements.

Small phreatic explosions continue to occur sporadically in the vicinity of the west end of the Pumice Shelf.

Report at 11:00 a.m., Thursday, March 10, 1983

Bad weather once again has prevented scientists from entering the crater to make deformation measurements. Two brief glimpses into the crater by a Water Resources crew working near Spirit Lake indicate that the spine on the new lobe has fallen. The University of Washington reports no change in seismicity over the last 24 hours.

Report at 1:40 a.m., Friday, March 11, 1983

Marginal weather permitted only a few measurements in the crater yesterday, March 10. However, those measurements indicate deformation is continuing.

Seismicity remains at slightly elevated levels.

Two small gas emission events occurred this morning, March 11. The first (about 7:20 AM) produced a plume to 9,000 ft. The second (10:25 AM) produced a plume to 12,000-14,000 ft. and lightly dusted the northeast flank of the Mountain with ash.

Report at 2:30 p.m., Monday, March 14, 1983

Marginal weather prevented crews from entering the crater over the weekend. Measurements made on Friday indicate that deformation is continuing. Crews on a night observation flight (Saturday) observed a gas emission event. The event occurred at 10:52 PM and produced a plume to just above the rim.

Seismicity returned to background today, March 14. However, the advisory issued on March 8 remains in effect.

Report at 9:30 p.m., Wednesday, March 16, 1983

Crater crews were able to access the mountain Tuesday, March 15, 1983. Measurements made indicate that deformation is continuing.

Seismicity remained near background levels yesterday, March 15. However, the advisory issued on March 8 remains in effect.

Report at 9:30 a.m., Thursday, March 17, 1983

Crater crews were unable to get to the mountain yesterday (Wednesday, March 16) due to high winds. Seismicity remained at background levels with a few small earthquakes noted. At 1031 pm a small gas event which may or may not have had any ash associated with it, was noted by the U. of W. seismic people (and Elk Rock River Watchers also). The advisory issued on March 8 remains in effect.

Report at 10:30 a.m., Friday, March 18, 1983

Excellent weather conditions yesterday, March 17, allowed crews to work in the crater. Deformation continues. Seismicity remains at background levels. The advisory issued on March

8 remains in effect.

Report at 2:30 p.m., Monday, March 21, 1983

On Friday, March 18, at 10:56 a.m. a gas emission event was observed. An event was also observed on Saturday at 11:01 a.m. Both events produced plumes to about 12000 feet. Seismicity remains at background levels. The advisory issued on March 8 remains in effect.

Report at 2:30 p.m., Tuesday, March 22, 1983

Crews were able to work in the crater for a few hours on Monday, March 21. Deformation continues. Seismicity remains at background levels. The advisory issued on March 8 remains in effect.

Report at 9:30 a.m., Wednesday, March 23, 1983

Crews were able to work in the crater for a few hours on Tuesday, March 22. Deformation continues. Seismicity remains at background levels. The advisory issued on March 8 remains in effect.

Report at 10:30 a.m., Thursday, March 24, 1983

Once again foul weather kept crews out of the crater yesterday (Wednesday, March 23). Seismicity remains at background levels, and the advisory issued on March 8 remains in effect.

Report at 11:30 a.m., Friday, March 25, 1983

A break between storms allowed crews into the crater yesterday, Thursday, March 24. Deformation continues, seismicity remains at background levels, and the advisory issued on March 8 remains in effect.

Report at 1:30 p.m., Monday, March 28 1983

Winter/spring storms continue to prevent access to the crater. Small gas-ash emission events continue to occur about once a day. Seismicity remains at background levels, and the advisory issued on March 8 remains in effect.

Report at 10:30 a.m., Tuesday, March 29, 1983

Spring storms prevented access to the crater yesterday, March 28. Small gas-ash emission events continue to occur about once a day. Seismicity remains at background levels. The last measurements (Thursday, March 24) indicate deformation is continuing. The advisory issued on March 8 remains in effect; however, an updated version is under discussion at this time.

Report at 08:30 a.m., Wednesday, March 30, 1983

Spring storms prevented access to the crater yesterday, March 29. Small gas-ash emission events continue to occur about once a day. Seismicity remains at background levels. The last measurements (Thursday, March 24) indicate deformation is continuing. The advisory issued on March 8 was not extended and the following Advisory termination was issued:

Mount St. Helens
Advisory termination

March 29, 1983
1:30 PM, pst

Seismicity has declined since we issued our extended outlook advisory on March 8, and ground deformation continues at a nearly constant rate. Other measurements indicate that slight changes continue. None of our measurements, however, indicates that an eruption is imminent. Some changes were observed on the surface of the dome during March, but poor weather has prevented detailed observations. This is the last day of the 3 week period indicated in our extended outlook advisory, and we have no basis for extending that advisory.

U.S. Geological Survey, Vancouver, WA
Univ. of Washington, Geophysics Program, Seattle, WA

Report at 08:30 a.m., Thursday, March 31, 1983

Seismicity remains at background level.
Inclement weather kept scientists away from Mount St. Helens while providing Water Resources crews with work monitoring high water in the rivers.

APRIL 1983**VOLCANIC AND SEISMIC ACTIVITY AT MOUNT ST. HELENS**

U.S. Geological Survey and University of Washington
 Vancouver and Seattle, Washington

Report at 08:30 a.m., Friday, April 1, 1983

A break between storms allowed crews into the crater yesterday, Thursday, March 31. Deformation of the dome continues; however, the rate is not accelerating. Heavy steam prevented geologists from observing the top of the dome. Seismicity remains at background levels. Small gas and ash emission events continue to occur once or twice a day. Two gas-ash events yesterday produced plumes to about 1000 feet above the rim and lightly dusted the crater and flanks of the mountain with ash.

Report at 01:30 p.m., Monday, April 4, 1983

WRD crews worked on Sunday. However, the crater did not clear early enough to permit GD crews to measure deformation. A high pressure system off the coast promises (?) clear weather for the next few days.

Seismicity remains at background levels. Small gas-ash emission events continue to occur several times a day. A gas emission event at about 03:15 this morning lightly dusted the Portland-Vancouver area with ash.

Report at 09:30 p.m., Tuesday, April 5, 1983

A high pressure system off the coast promises clear weather for the next few days. The crater cleared Monday and permitted GD crews to measure deformation.

Seismicity remains at background levels. Small gas-ash emission events continue to occur several times a day. Gas emission events, occurring at about 18:30 Monday evening and again at 06:20 Tuesday morning, rose to between 12 and 14,000 feet and were clearly visible from the Portland-Vancouver area.

Report at 12:30 p.m., Wednesday, April 6, 1983

WRD and GD crews worked at MSH yesterday, April 5. Seismicity remains at background levels.

Report at 08:30 a.m., Thursday, April 7, 1983

WRD and GD crews worked at Mount St. Helens yesterday, April 6. Seismicity remains at background levels. A gas emission event occurred at approximately 1320 PST, sending a dark plume to about 14000 feet. A light dusting of ash was observed to the southeast of the mountain.

Report at 01:30 p.m., Friday, April 8, 1983

WRD and GD crews worked at Mount St. Helens yesterday, April 7. Seismicity remains at background levels. Occasional gas emission events are continuing.

Report at 01:30 p.m., Tuesday, April 12, 1983

Weather conditions prevented crews from working over the weekend. However, geologists were able to work in the crater for a few hours on Monday. Crews will be on weather standby today.

Seismicity remains at background level. Small gas emission events continue to occur several times a day. Many of the more recent events have produced plumes which did not rise above the rim.

Report at 09:00 a.m., Wednesday, April 13, 1983

Seismicity remains at background level. Small gas emission events continue to occur several times a day. Many of the more recent events have produced plumes which did not rise above the rim.

Report at 12:45 p.m., Thursday, April 14, 1983

Seismicity remains at background level. Small gas emission events continue to occur several times a day. Many of the more recent events have produced plumes which did not rise above the rim. Beautiful weather today has allowed Geologic and Water Resources crews to continue their studies around the mountain.

Report at 11:45 a.m., Friday, April 15, 1983

Seismicity remains at background level. Gas emission events continue to occur several times a day. Four events yesterday, April 14, produced steam/ash plumes to several thousand feet above the rim. The smaller events, which did not rise above the rim, appeared to contain only steam.

Report at 13:15 p.m. Monday, April 18, 1983

Seismicity remains at background level. Gas emission events continue to occur several times a day. One event, occurring at 12:59 PM today, reached elevations above 20,000 feet. Smaller events, which did not rise above the rim, appeared to contain only steam.

Report at 12:30 p.m. Tuesday, April 19, 1983

Seismicity remains at background level. The following Information Update was issued Tuesday, April 19, 1983.

Mount St. Helens

April 19, 1983

Information Update

1:00 PM (PST)

In our advisory of March 29, we indicated that some changes had occurred on the dome, but that these were difficult to confirm due to poor weather. In the past week, clear weather has allowed measurements that show elevated gas emissions, increased rockfalls from the dome, and continuing deformation of the dome. The eastern side of the dome is growing slowly and probably has been since early March, accompanied by low-level seismic activity. It remains unclear whether new material has been extruded onto the surface of the dome (i.e. exogenous dome growth) or if all growth has been internal (i.e. endogenous dome growth).

Continued growth of the dome has made its eastern flank less stable, and has resulted in numerous rockfalls from the February 1983 lobe onto the crater floor. Rockfalls do not normally pose hazards beyond the crater, but it is conceivable that collapse of a large portion of the February lobe could cause an explosion, rapid snowmelt, and relatively small mudflows. Rockfalls and related phenomena are generally unpredictable, but are more likely to occur when the dome is actively growing.

The daily emissions of gas and ash, which have been widely visible recently during clear weather, come mainly from the top of the dome and probably occur when groundwater is heated beneath the dome and flashed into steam. The relationship of these emissions to the continuing growth of the eastern part of the dome is not entirely clear at this time. Such gas and ash emissions do not pose serious hazards outside the crater, and result in only light dustings of ash in areas downwind from the volcano.

U.S. Geological Survey, Cascades Volcano Observatory, Vancouver, WA

University of Washington, Geophysics Program, Seattle, WA

Report at 11:30 a.m., Wednesday, April 20, 1983

Seismicity remains at background level. University of Washington reports that there has been an increase in the number of surface type events indicating rockfall activity may have increased. The Information Update issued Tuesday, April 19, 1983 is still in effect.

Report at 11:00 a.m., Thursday, April 21, 1983

Seismicity remains at background level. University of Washington reports that there has been an increase in the number of surface type events of April 20 continues at the same level. The Information Update issued Tuesday, April 19, 1983 is still in effect.

Report at 09:00 a.m., Friday, April 22, 1983

Seismicity is currently at slightly elevated levels. Exogenous growth was confirmed Thursday by the observation of a growing spine by crater crews and the gas flight. University of Washington reports that the number of surface type events continues and are more energetic. The Information Update issued Tuesday, April 19, 1983 is still in effect.

Report at 09:00 a.m. Monday, April 25, 1983

Seismicity is currently at slightly elevated levels. Crews were unable to work in the crater over the weekend. The Information Update issued Tuesday, April 19, 1983 is still in effect.

Report at 10:00 a.m., Tuesday, April 26, 1983

Seismicity is currently at slightly elevated levels. Rockfall activity on the northeast side of the dome appears to have increased slightly. Deformation of the dome continues; however the rate is not accelerating. The Information Update issued Tuesday, April 19, 1983 is still in effect.

Report at 09:00 a.m. Wednesday, April 27, 1983

Seismicity remains at slightly elevated levels. Rockfalls on the northeast side of the dome continue to occur. Deformation of the dome continues; however the rate is not accelerating. Poor weather conditions prevented crews from making deformation measurements from the top of the dome. The Information Update issued Tuesday, April 19, 1983 is still in effect.

Report at 11:00 a.m. Thursday, April 28, 1983

Seismicity remains at slightly elevated levels. Rockfalls on the northeast side of the dome continue to occur. Deformation of the dome continues; however the rate is not accelerating - deformation rates are highest on the east side/February lobe. The new spine on the February lobe is the highest point on the dome (19 meters higher than the top of the August lobe and 8 meters higher than the conical mound at the top of the February lobe.) Gas/ash emission events continue to occur, occasionally producing plumes which rise thousands of feet above the rim. The Information Update issued Tuesday, April 19, 1983 is still in effect.

Report at 11:00 a.m. Friday, April 29, 1983

Seismicity remains at slightly elevated levels. Rockfalls on the northeast side of the dome continue to occur. Deformation of the dome continues; however the rate is not accelerating. Gas/ash emission events continue to occur, occasionally producing plumes which rise thousands of feet above the rim. The Information Update issued Tuesday, April 19, 1983 is still in effect.

MAY 1983

VOLCANIC AND SEISMIC ACTIVITY AT MOUNT ST. HELENS

U.S. Geological Survey and University of Washington
Vancouver and Seattle, Washington

Report at 09:00 a.m., Monday, May 2, 1983

Seismicity remains at slightly elevated levels. Deformation of the dome continues at a fairly constant rate. Small gas/ash emission events continue to occur several times a day. The Information Update issued Tuesday, April 19, 1983 is still in effect.

Report at 11:00 a.m., Tuesday, May 3, 1983

Seismicity remains at slightly elevated levels. Deformation of the dome continues at a fairly constant rate. Small gas/ash emission events continue to occur several times a day. The Information Update issued Tuesday, April 19, 1983 is still in effect.

Report at 10:30 a.m., Wednesday, May 4, 1983

Seismicity remains at slightly elevated levels. Deformation of the dome continues at a fairly constant rate. Small gas/ash emission events continue to occur several times a day. The Information Update issued Tuesday, April 19, 1983 is still in effect.

Report at 10:15 a.m., Thursday, May 5, 1983

Seismicity remained at slightly elevated levels yesterday May 4. Measurements indicated that deformation of the east side of the dome was continuing at a fairly constant rate. Based on field observations made yesterday the following Information Update was issued this morning (May 5) at 10:00 am

Mount St. Helens
Information Update

May 5, 1983
10:00 AM (PDT)

Our statement of April 19 indicated that the eastern side of the dome had been growing slowly, probably since early March. It was, however, unclear whether new material had been extruded onto the surface (a process commonly termed an eruption) or whether all growth had been internal (endogenous growth), simply disrupting the surface of the dome and inflating it much like a balloon. There is a complete gradation between the two types of activity, and when rates of

growth are relatively slow, as they have been, it can be difficult to determine with certainty whether new lava has actually reached the surface of the dome.

Observations since April 19 demonstrate that the east, particularly the northeast, sector of the dome has continued to be mobile, resulting in outward movement of the northeast margin of the dome by as much as 1 m per day. Numerous rockfalls have occurred because of instabilities caused by this mobility. Sometime between late April 29 and early May 4, new lava appeared high on the northeast part of the dome. This lava was pushed very slowly from a small spreading center, typical of, but smaller than, those accompanying growth of earlier lobes. The appearance of new lava on the surface means that an eruption in the usual sense of the term has and perhaps still is taking place. We emphasize that this extrusion is simply a natural outgrowth of the activity of the past two months.

Seismicity continues at a slightly elevated level. Emissions of gas and ash are expected to continue, as are rockfalls. Hazards remain as stated on April 19, although the chances of significant mudflows have lessened slightly owing to decrease in the snowpack during recent warm weather.

U.S. Geological Survey, Cascades Volcano Observatory, Vancouver, WA
University of Washington, Geophysics Program, Seattle, WA

Report at 11:45 a.m., Friday, May 6, 1983

Seismicity remains at slightly elevated levels. Crews were unable to work in the crater yesterday (May 5). Based on field observations made Wednesday the following Information Update was issued yesterday.

Mount St. Helens
Information Update

May 5, 1983
10:00 AM (PDT)

Our statement of April 19 indicated that the eastern side of the dome had been growing slowly, probably since early March. It was, however, unclear whether new material had been extruded onto the surface (a process commonly termed an eruption) or whether all growth had been internal (endogenous growth), simply disrupting the surface of the dome and inflating it much like a balloon. There is a complete gradation between the two types of activity, and when rates of growth are relatively slow, as they have been, it can be difficult to determine with certainty whether new lava has actually reached the surface of the dome.

Observations since April 19 demonstrate that the east, particularly the northeast, sector of the dome has continued to be mobile, resulting in outward movement of the northeast margin of the dome by as much as 1 m per day. Numerous rockfalls have occurred because of instabilities caused by this mobility. Sometime between late April 29 and early May 4, new lava appeared high on the northeast part of the dome. This lava was pushed very slowly from a small spreading center, typical of, but smaller than, those accompanying growth of earlier lobes. The appearance of new lava on the surface means that an eruption in the usual sense of the term has and perhaps

still is taking place. We emphasize that this extrusion is simply a natural outgrowth of the activity of the past two months.

Seismicity continues at a slightly elevated level. Emissions of gas and ash are expected to continue, as are rockfalls. Hazards remain as stated on April 19, although the chances of significant mudflows have lessened slightly owing to decrease in the snowpack during recent warm weather.

U.S. Geological Survey, Cascades Volcano Observatory, Vancouver, WA
University of Washington, Geophysics Program, Seattle, WA

Report at 01:45 p.m., Monday, May 9, 1983

Seismicity remains at slightly elevated levels. Crews were unable to work in the crater over the weekend. The information update issued on May 5 remains in effect.

Report at 01:45 p.m., Tuesday, May 10, 1983

Seismicity remains at slightly elevated levels. Crews were unable to work in the crater yesterday. The information update issued on May 5 remains in effect.

Report at 09:30 AM Wednesday, May 11, 1983

Seismicity remains at slightly elevated levels. Crews were unable to work in the crater yesterday May 10, 1983. Reports received this morning May, 11, 1983 indicate that the new lobe on the NE portion of the dome has become larger since May 5th and has oversteepened the northeast section of the dome. This condition may lead to an increase in rockfall activity. The information update issued on May 5 remains in effect.

Report at 12:30 p.m., Thursday May 12, 1983

Seismicity remains at slightly elevated levels. Crews were able to work in the crater yesterday May 11, 1983. The new lobe on the NE portion of the dome has become larger since May 5th and has oversteepened the northeast section of the dome. This condition may lead to an increase in rockfall activity. Small gas/ash emission events continue to occur several times a day. Clear weather today has allowed field crews into the crater to continue their measurements and observations. The information update issued on May 5 remains in effect.

Report at 13:30 p.m., Friday May 13, 1983

Seismicity remains at slightly elevated levels. Crews were able to work in the crater yesterday May 12, 1983. Measurements from the new lobe on the NE portion of the dome indicate movement continues. Small gas/ash emission events and large rockfalls continue to occur several times a day. The information update issued on May 5 remains in effect.

Report at 09:30 a.m., Monday May 16, 1983

Seismicity remains at slightly elevated levels. Crews were able to work in the crater on Friday but not on Saturday and Sunday. Deformation measurements indicate movement of the new lobe continues. Small gas/ash emission events and large rockfalls continue to occur several times a day. The information update issued on May 5 remains in effect.

Report at 10:00 a.m., Wednesday May 18, 1983

Seismicity remains at slightly elevated levels. Crews were able to work in the crater on Tuesday. Deformation measurements indicate movement of the new lobe continues. Small gas/ash emission events and large rockfalls continue to occur several times a day. The information update issued on May 5 remains in effect. Crews will be in the field working and giving press interviews for the May 18th anniversary weather permitting.

Report at 1:30 p.m., Thursday, May 19, 1983

Seismicity remains at slightly elevated levels. Crews were unable to work in the crater on Wednesday. The information update issued on May 5 remains in effect. Large rockfalls continue to occur several times a day.

Report at 1:30 p.m., Monday, May 23, 1983

Seismicity and gas emissions remain at slightly elevated levels. Measurements made Thursday indicate that deformation of the east side of the dome continues at about the same rate as previous few weeks. Rates on the north and west sides have slowed. Large rockfalls continue to occur from the leading edge of the new lobe.

Report at 9:30 a.m., Tuesday, May 24, 1983

Seismicity and gas emissions remain at slightly elevated levels. Measurements made yesterday indicate that deformation of the east side of the dome is continuing. Large rockfalls continue to occur from the leading edge of the new lobe.

Report at 9:30 a.m., Wednesday May 25, 1983

Seismicity and gas emissions remain at slightly elevated levels. Crews working in the crater yesterday continued to report small heard and felt earthquakes and numerous large rockfall off the new lobe.

Report at 2:00 p.m., Thursday May 26, 1983

Seismicity and gas emissions remain at slightly elevated levels with occasional and sometimes large rock falls. Nobody was in the crater yesterday--thus no deformation measurements were made.

Report at 9:00 a.m., Friday May 27, 1983

Seismicity and gas emissions remain at slightly elevated levels. Occasional and sometimes large rockfalls continue to occur from the NE side of the new lobe. Crater wall rock and snow avalanche frequency is increasing. Crews working in the crater yesterday reported that the spine had fallen.

Report at 9:00 a.m., Tuesday, May 31, 1983

Seismicity and gas emissions remain at slightly elevated levels. Measurements made Friday indicate that deformation is continuing on the east side of the dome. Crater crews reported numerous large rockfall, several small, short-lived gas/ash emission events, and a few heard and felt quakes on Friday. Crews took Sat. and Sun. off and were prevented from reaching the crater on Monday by low cloud and rain.

JUNE 1983**VOLCANIC AND SEISMIC ACTIVITY AT MOUNT ST. HELENS**

U.S. Geological Survey and University of Washington
 Vancouver and Seattle, Washington

Report at 1:00 p.m., Wednesday, June 1, 1983

Seismicity and gas emissions remain at slightly elevated levels. Crews were unable to work in the crater yesterday.

Report at 11:00 a.m., Thursday, June 2, 1983

Seismicity and gas emissions remain at slightly elevated levels. Crews were unable to work in the crater yesterday. The following information update was issued yesterday June 1, at 3:00 PM PDT

"The dome is continuing to grow at about the same rate as it has for the past 4 months. Most of the growth is internal (endogenous), but the extrusion (exogenous growth) that began about May 1 is also continuing. Nearly all growth is occurring on the eastern side of the dome. Snow in the crater is giving way to summer, and mudflow hazards are correspondingly reduced."

Report at 11:00 a.m., Monday, June 6, 1983

Seismicity and gas emissions remain at slightly elevated levels. Deformation measurements made Friday indicate that the eastern portion of the dome is still moving. Large rockfalls continue to occur from the northeast edge of the May lobe. A large snow and rock avalanche deposit covers the southwest crater floor and the base of the dome/dome talus on the southwest side. The avalanche occurred between Friday May 27 and Friday June 3. The statement issued on June 1 remains in effect.

Report at 11:00 a.m., Tuesday June 7, 1983

Seismicity and gas emissions remain at slightly elevated levels. Deformation measurements made Monday indicate that the eastern portion of the dome is still moving. Large rockfall from the northeast side of the dome are still common. Small avalanches from the crater walls occur every few minutes. Crews heard and felt a few small earthquakes while working in the crater.

Intermittent gas/ash events have produced plumes to a few thousand feet above the rim. Excellent weather conditions have provided a clear view of the plumes throughout southwest Washington.

Report at 10:30 a.m., Wednesday June 8, 1983

Seismicity and gas emissions remain at slightly elevated levels. Deformation measurements made Monday indicate that the eastern portion of the dome is still moving. Large rockfall from the northeast side of the dome are still common. Small avalanches from the crater walls occur every few minutes. Crews heard and felt a few small earthquakes while working in the crater.

Intermittent gas/ash events have produced plumes to a few thousand feet above the rim. Excellent weather conditions have provided a clear view of the plumes throughout southwest Washington and Oregon.

Report at 10:00 a.m., Thursday June 9, 1983

Seismicity and gas emissions remain at slightly elevated levels. Large rockfalls from the northeast side of the dome are still common. Small avalanches from the crater walls occur every few minutes. Crews felt a few small earthquakes while working in the crater. Small gas/ash emission events continue to occur.

Report at 09:30 a.m., Monday June 13, 1983

Seismicity and gas emissions remain at slightly elevated levels. Crews were unable to work at the mountain on Friday or Saturday. Clouds cleared Sunday afternoon and crews were able to work for a few hours. The information update issued on June 1, 1983, remains in effect.

Report at 11:30 a.m., Tuesday June 14, 1983

Seismicity and gas emissions remain at slightly elevated levels. Deformation of the east side of the dome is continuing. Large rockfall from the northeast side of the dome and smaller rockfalls from the crater walls occur throughout the day. A gas emission event with a plume several thousand feet above the rim was clearly visible from Portland before sunset yesterday. The information update issued on June 1, 1983, remains in effect.

Report at 13:30 p.m., Wednesday June 15, 1983

Seismicity and gas emissions remain at slightly elevated levels. Deformation of the east side of the dome is continuing. Large rockfalls from the northeast side of the dome and smaller rockfalls from the crater walls occur throughout the day. The information update issued on June 1, 1983, remains in effect.

Report at 11:00 a.m., Thursday June 16, 1983

Seismicity and gas emission remain at slightly elevated levels. Deformation of the east side of the dome is continuing. Large rockfalls on the northeast side of the dome and smaller rockfalls from the crater walls occur throughout the day. The information update issued on June 1, 1983 remains in effect.

Report at Noon, Friday, June 17, 1983

Seismicity and gas emissions remain at slightly elevated levels. Deformation of the east side of the dome is continuing at a constant rate. Large rockfalls from the northeast side of the dome and smaller rockfalls from the crater walls occur throughout the day. Several small gas/ash events were observed yesterday. The plumes cleared the rim by several hundred feet. The information update issued on June 1, 1983, remains in effect.

Report at Noon, Tuesday June 21, 1983

Seismicity and gas emissions remain at slightly elevated levels. Deformation of the east side of the dome is continuing at a constant rate. Large rockfalls from the northeast side of the dome and smaller rockfalls from the crater walls occur throughout the day. A large snow and rock avalanche off the west crater wall occurred last night at 2328 pdt. The avalanche originated at the crater rim and left a deposit covering much of the west crater floor (south of scarp). The information update issued on June 1, 1983, remains in effect.

Report at 0930, Thursday, June 23, 1983

Seismicity remains at slightly elevated levels. Deformation of the east side of the dome is continuing at a constant rate. Large rockfalls from the northeast side of the dome and smaller rockfalls from the crater walls occur throughout the day. Gas emission levels have increased over the last week. Small gas/ash emission events continue to occur many times a day. Most of these produce plumes to only a few hundred feet above the dome. The information update issued on

June 1, 1983, remains in effect.

Report at 1500, Friday, June 24, 1983

Seismicity remains at slightly elevated levels. Deformation of the east side of the dome is continuing at a constant rate. Rockfalls from the dome and smaller rockfalls from the crater walls occurred throughout the day (Thursday). Gas emission levels (SO₂) have increased over the last week (Thursday's report). Small gas/ash emission events continue to occur many times a day. Most of these produce plumes to only a few hundred feet above the dome. The information update issued on June 1, 1983, remains in effect. Weather prevented crews from entering the crater Thursday, June 23 and Friday, June 24.

Report at 1100, Monday, June 27, 1983

Seismicity remains at slightly elevated levels. Deformation of the east side of the dome is continuing at a constant rate. Rockfalls from the dome and smaller rockfalls from the crater walls are continuing. Gas emission levels (SO₂) remain at an elevated level (see last Thursday's report). Small gas/ash emission events continue to occur many times a day. Most of these produce plumes to only a few hundred feet above the dome. The information update issued on June 1, 1983, remains in effect.

Report at 1200, Tuesday, June 28, 1983

Seismicity remains at slightly elevated levels. Deformation of the east side of the dome is continuing at a constant rate. Rockfalls from the dome and smaller rockfalls from the crater walls are continuing. Gas emission levels (SO₂) remain at an elevated level. Small gas/ash emission events continue to occur many times a day. Most of these produce plumes to only a few hundred feet above the dome. The information update issued on June 1, 1983, remains in effect.

Report at 0800 a.m., Wednesday, June 29, 1983

Seismicity remains at slightly elevated levels. Deformation of the east side of the dome is continuing at a constant rate. Rockfalls from the dome and smaller rockfalls from the crater walls are continuing. Small gas/ash emission events continue to occur many times a day. Most of these produce plumes to only a few hundred feet above the dome. The information update issued on June 1, 1983, remains in effect.

JULY 1983**VOLCANIC AND SEISMIC ACTIVITY AT MOUNT ST. HELENS**

U.S. Geological Survey and University of Washington
 Vancouver and Seattle, Washington

Report at 0800, Friday, July 1, 1983

Seismicity and gas emissions remain at slightly elevated levels. Deformation of the east side of the dome is continuing at a constant rate. The information update issued on June 1, 1983, remains in effect.

Report at noon, Monday, July 5, 1983

Seismicity remains at a slightly elevated Level. Deformation, last measured on Tuesday June 28, was continuing at a constant rate. SO₂ emissions are continuing at the elevated level reported in mid-June. The information update issued on June 1, 1983, remains in effect.

Report at noon, Thursday, July 7, 1983

Seismicity continues at slightly elevated levels. Gas emissions continue at the elevated levels reported in mid-June. The information update issued on June 1, 1983, remains in effect.

Report at noon, Friday, July 8, 1983

Seismicity continues at slightly elevated levels. Gas emissions continue at the elevated levels reported in mid-June. The information update issued on June 1, 1983, remains in effect.

Report at 1100 a.m., Monday, July 11, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Crews worked in the crater and around the mountain during the weekend. The information update issued on June 1, 1983, remains in effect.

Report at 1100 a.m., Tuesday, July 12, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions have returned to low level. The information update issued on June 1, 1983, remains in effect.

Report at 1100 a.m., Wednesday, July 13, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are at a low level. Poor weather conditions prevented crews from accessing the mountain. The information update issued on June 1, 1983, remains in effect.

Report at noon, Friday, July 15, 1983

Seismicity continues at slightly elevated levels. Crews have been unable to work in the crater or to fly in gas plane due to wind, rain and clouds. Seismicity on YEL appeared to be up on Wednesday and several large and long duration signal were recorded (early AM on 13, early AM on 14, and late night on 14th) which we suspected were rockfalls/avalanches from the (north?) side of the dome.

Crater crews today (Friday) reported a new rockfall/avalanche deposit on north side of dome and new ash around Garden - presumably from the events recorded on the 13th and 14th.

Report at noon, Monday, July 18, 1983

Seismicity continues at slightly elevated levels. Crews were able to work in the crater both Friday and Saturday. Deformation of the dome continues at a constant rate. Gas emissions have returned to slightly elevated levels reported in mid-June.

Report at 1400, Tuesday, July 19, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues at a constant rate. Gas emissions have returned to slightly elevated levels reported in mid-June.

Report at 1600, Wednesday, July 20, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues at a constant rate. Gas emissions have returned to slightly elevated levels reported in mid-June.

Weather prevented crews from working in the crater Tuesday.

Report at 1300, Thursday, July 21, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues at a constant rate. Gas emissions remain at slightly elevated levels.

Report at 10:00 a.m., Monday, July 25, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues at a constant rate. Gas emissions have returned to low levels.

Report at 10:00 a.m., Wednesday, July 27, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues at a constant rate. Gas emissions have returned to low levels.

Report at 11:00 a.m., Friday, July 29, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues at a constant rate. Gas emissions are low level.

AUGUST 1983**VOLCANIC AND SEISMIC ACTIVITY AT MOUNT ST. HELENS**

U.S. Geological Survey and University of Washington
Vancouver and Seattle, Washington

Report at 11:00 a.m., Monday, August 1, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues at a constant rate. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day.

Report at 09:00 a.m., Wednesday, August 3, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues at a constant rate. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. August 1, 1983 the following Information update was issued:

Mount St. Helens
Information Update

August 1, 1983

The lava dome in the crater of Mount St. Helens continues to grow. Lava is being added to both the interior and the exterior of the dome; the most rapid growth is on the northeast side of the dome. Seismicity, ground deformation, gas emissions, and the rates of extrusion and intrusion fluctuate slightly from week to week and from month to month; activity in June and July was slightly less than that during May. The most rapid growth produces extrusions; slower growth is accommodated as intrusions within the dome. Growth since February of this year has been more continuous but at a slower daily rate than that during the eruptions of 1981-82, which typically lasted for several days and which were separated by weeks or months of inactivity. Despite the slower rate, the more continuous activity results in an average rate of growth about the same as it has been since the initial appearance of the dome in October, 1980. Small rockfalls and occasional gas-and-ash emissions are the most visible aspects of the current activity; most rockfalls are from the actively moving segment. Large rockfalls or small pyroclastic flows could also occur, but are much less likely than smaller events.

U.S. Geological Survey, Vancouver, WA
University of Washington, Geophysics Program, Seattle, WA

Report at 09:00 a.m., Friday, August 5, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues at a constant rate. Gas emissions are low level. Small gas and ash emission events continue to occur

several times a day. The advisory issued on August 1 remains in effect.

Report at 04:00 p.m., Monday, August 8, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues at a constant rate. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. Plumes from gas and ash events during the weekend were visible owing to clear skies. The advisory issued on August 1 remains in effect.

Report at 11:00 a.m., Wednesday, August 10, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues at a constant rate. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The advisory issued on August 1 remains in effect.

Report at 11:00 a.m., Friday, August 12, 1983

Weather prevented crews from operating in the crater, Thursday. Seismicity continues at slightly elevated levels. Deformation of the dome continues at a constant rate. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The advisory issued on August 1 remains in effect.

Report at 11:00 a.m., Monday, August 15, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues at a constant rate. Gas emissions are slightly higher than they were during the first week in August; however, they are still considered 'low level'. Small gas and ash emission events continue to occur several times a day. These emissions have been clearly visible from the Portland/Vancouver area on clear weather days. The advisory issued on August 1 remains in effect.

Report at 13:00 p.m., Thursday, August 18, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions have returned to low- 'low level'. Small gas and ash emission events continue to occur several times a day. These emissions have been clearly visible from the Portland/Vancouver area on clear weather days. The advisory issued on August 1 remains in effect.

Report at 10:00 a.m., Friday, August 19, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. These emissions have been clearly visible from the Portland/Vancouver area on clear weather days. The advisory issued on August 1 remains in effect.

Report at 10:00 a.m., Monday, August 22, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. These emissions have been clearly visible from the Portland/Vancouver area on clear weather days. Rockfalls from the north face of the dome continue, many of these rockfalls kick up dust plumes which rise above the rim. The advisory issued on August 1 remains in effect.

Report at 09:00 a.m., Tuesday August 23, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. These emissions have been clearly visible from the Portland/Vancouver area on clear weather days. Rockfalls from the north face of the dome continue, many of these rockfalls kick up dust plumes which rise above the rim. The advisory issued on August 1 remains in effect.

Report at 09:00 a.m., Wednesday August 24, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. These emissions have been clearly visible from the Portland/Vancouver area on clear weather days. Rockfalls from the north face of the dome continue, many of these rockfalls kick up dust plumes which rise above the rim. The advisory issued on August I remains in effect.

Report at 9:30 a.m., Thursday, August 25, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day.

These emissions have been clearly visible from the Portland/Vancouver area on clear weather days. Rockfalls from the north face of the dome continue, many of these rockfalls kick up dust plumes which rise above the rim. The advisory issued on August 1 remains in effect.

Report at noon, Friday, August 26, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The advisory issued on August 1 remains in effect.

Report at 1400, Monday, August 29, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. Crews did not work over the weekend. The advisory issued on August 1 remains in effect.

Report at 1545, Tuesday, August 30, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The advisory issued on August 1 remains in effect.

Report at 0900, Wednesday, August 31, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The advisory issued on August 1 remains in effect.

SEPTEMBER 1983**VOLCANIC AND SEISMIC ACTIVITY AT MOUNT ST. HELENS**

U.S. Geological Survey and University of Washington
 Vancouver and Seattle, Washington

Report at 1200, Thursday, September 1, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The advisory issued on August 1 remains in effect.

Report at 1100 a.m., Friday, September 2, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The advisory issued on August 1 remains in effect.

Report at 1500, Tuesday, September 6, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. Crews were unable to work in the crater on Saturday owing to poor weather. Crews took Sunday and Monday off. The advisory issued on August 1 remains in effect.

Report at 1000, Wednesday, September 7, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The advisory issued on August 1 remains in effect.

Report at 1400, Thursday, September 8, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The advisory issued on August 1 remains in effect.

 Report at 0900, Monday, September 12, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The advisory issued on August 1 remains in effect.

Report at 0900, Tuesday, September 13, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The advisory issued on August 1 remains in effect.

Report at 1000, Tuesday, September 20, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash events continue to occur several times a day. The information statement (below) issued on September 13 remains in effect.

Mount St. Helens
 Information Statement

September 13, 1983

Routine measurements in the crater of Mount St. Helens shows that since late August the rate of swelling of the lava dome has been increasing appreciably, particularly on the south and southeast flanks. Meanwhile, the extrusion of the active lobe of lava on the northeast side of the dome continues at a roughly constant rate. Rockfalls and small avalanches continue from the margins of this active lobe. Emissions of gas and ash continue to occur from the summit of the dome several times each day; the largest of these produce plumes that rise to a few thousand feet above the crater rim. Seismicity remains at levels slightly elevated above background. The exhalation rate of sulfur dioxide gas has not changed significantly.

The increasing swelling suggests that the rate at which magma is entering the dome is increasing while the rate of extrusion is not. The increase in swelling resembles behavior that preceded eruptions in 1981 and 1982. This suggests either that a new lobe of lava might be extruded from some other part of the dome, or that the rate of extrusion of the presently active lobe might increase. It is not yet possible to anticipate when such a change might occur, but the situation is being closely monitored; information will be updated as appropriate. The changes being observed now do not suggest any immediate increase in the degree of hazard except within and near the crater.

U.S. Geological Survey, Vancouver, WA

University of Washington Geophysics program, Seattle, WA

Report at 1200, Wednesday, September 21, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The information statement issued on September 13 remains in effect. High winds today prevented crews from entering the crater and measuring deformation of the dome.

Report at 0830, Thursday, September 22, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day, with one plume reaching the twelve hundred foot level at around 1700. The information statement issued on September 13 remains in effect. Pleasant weather today will enable crews to enter the crater and carry on with their measurements of dome activity

Report at 1600, Monday, September 26, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. Crews did not work over the weekend. The information statement issued on September 13 remains in effect.

Report at 1600, Tuesday September 27, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The information statement issued on September 13 remains in effect.

Report at 1100, Wednesday September 28, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The information statement issued on September 13 remains in effect.

Report at 1020, Thursday, September 29, 1983

Seismicity continues at slightly elevated levels. Deformation of the dome continues. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The information statement issued on September 13 remains in effect.

Report at 1230, Friday, September 30, 1983

Seismicity continues at slightly elevated levels. Deformation rates on the south side of the dome are accelerating. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. The information statement issued on September 13 remains in effect.

OCTOBER 1983**VOLCANIC AND SEISMIC ACTIVITY AT MOUNT ST. HELENS**

U.S. Geological Survey and University of Washington
 Vancouver and Seattle, Washington

Report at 1000, Monday, October 03, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation rates on the south side of the dome are accelerating, rates doubled between 9/28 and 9/30. This acceleration prompted crews to work over the weekend. On Saturday, October 1, at 1900 the following Advisory was issued.

Mount St. Helens
 Volcano Advisory

October 1, 1983
 7:00 PM

Since the last information statement on September 13, 1983, the rate of spreading on the southeast and south sides of the lava dome in the crater of Mount St. Helens has continued to increase. For more than two weeks the rate of spreading increased gradually, but since September 28 the rate has increased more rapidly and is now 3-4 times that on September 13. If current trends continue, the currently ongoing eruption will probably be modified by a new extrusion beginning within the next ten days, possibly within five days. The most likely behavior will be quiet extrusion of lava, but some explosive activity more vigorous than the frequent gas and ash emissions is possible. Hazards have increased slightly within and near the crater but have not increased significantly beyond the immediate vicinity of the crater.

U.S. Geological Survey, Vancouver, WA
 University of Washington Geophysics Program, Seattle, WA

Report at 1000, Wednesday October 05, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation rates on the south side of the dome are continuing at a high rate. The advisory issued on Saturday, October 1, remains in effect.

Report at 1130, Friday, October 07, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation rates on the south side of the dome are continuing at a high rate. The advisory issued on Saturday, October 1, remains in effect.

Report at 1030, Tuesday October 11, 1983

Crews worked in the crater on both Saturday and Monday. Based on these weekend measurements and observations the following Eruption Advisory was issued this morning:

Mount St. Helens
Eruption Advisory

October 11, 1983
10:00 A.M.

The anticipated change in the ongoing eruption at the lava dome of Mount St. Helens has quietly begun. Lava is emerging from a new source near the head and south margin of the active lobe. The new extrusion probably began late last week, but could not be confirmed by ground observation until October 10. Other portions of the active lobe continue to move, at somewhat slower rates than previously. Seismicity remains slightly elevated, and gas and ash emissions continue to occur, sometimes several times per day.

Long form of advisory

The anticipated change in the ongoing eruption at the lava dome of Mount St. Helens has quietly begun. Lava is emerging from a new source near the head of the active lobe, raising a ridge along the southern margin of the lobe, east of the central crater of the dome. A point on this new, growing ridge is now the highest point of the dome, standing about 10 meters higher than the previous summit. The new extrusion probably began late last week, but could not be confirmed by ground observations until October 10. Other portions of the active lobe continue to move about 1/2 meter per day, somewhat slower than previously. The maximum rate of spreading of the south and southeast flanks of the lava dome has become stable at about one meter per day. Seismicity remains slightly elevated, and gas and ash emissions continue to occur, sometimes several times per day.

Report at 1100, Wednesday, October 12, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation rates on the south side of the dome are continuing at a high rate. The advisory issued on Tuesday, October 11, remains in effect.

Report at 1600, Friday, October 14, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Inflation of the south margin of the active lobe is continuing. New material is extruding from a point near the head of the active lobe (as stated in the October 11 advisory).

Report at 1400, Monday, October 17, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate.. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory).

Report at 1300, Wednesday, October 19, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate.. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory).

Report at 1030, Thursday, October 20, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory).

Report at 0930, Friday, October 21, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory).

Report at 1025, Monday, October 24, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory).

Report at 0900, Tuesday, October 25, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory).

Report at 0900, Wednesday, October 26, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory).

Report at 1200, Thursday, October 27, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory).

Report Friday October 28 – Monday October 31, 1983 -- *1 update issued, but missing*

NOVEMBER 1983**VOLCANIC AND SEISMIC ACTIVITY AT MOUNT ST. HELENS**

U.S. Geological Survey and University of Washington
 Vancouver and Seattle, Washington

Report at 0900, Tuesday, November 1, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory).

Report at 0800, Wednesday, November 2, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory). Poor weather conditions have prevented crews from making onsite measurements in the field during the last two days.

Report at 1200, Friday, November 4, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory). Poor weather conditions have prevented crews from making onsite measurements in the field during the last three days.

Report at 1200, Monday, November 7, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory). Poor weather conditions have prevented crews from making onsite measurements during the weekend.

Report at 0900, Wednesday, November 9, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory).

Report at 1400, Monday, November 14, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory). Poor weather conditions have prevented crews from making onsite measurements in the field during the last five days.

Report at 0900, Tuesday, November 15, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory). Poor weather conditions have prevented crews from making onsite measurements in the field during the last six days.

Report at 1000, Wednesday, November 16, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory). Poor weather conditions have prevented Geologic Division crews from making onsite measurements of the volcano in the field during the last seven days.

Report at 1000, Thursday, November 17, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory). Poor

weather conditions have prevented Geologic Division crews from making onsite measurements of the volcano in the field during the last eight days.

Report at 1130, Friday, November 18, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Small gas and ash emission events continue to occur several times a day. Deformation of the south side of the dome is continuing at high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory). Poor weather conditions have prevented Geologic Division crews from making onsite measurements of the volcano in the field during the last nine days.

Report at 1230, Monday, November 21, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Small gas and ash emission events continue to occur daily. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory). Poor weather conditions prevented Geologic Division crews from making onsite measurements over the weekend. Crews are enroute to the crater at this time (in response to rumors of “clear of clouds above 3500 feet”).

Report at 0800, Tuesday, November 22, 1983

Seismicity continues at slightly elevated levels. Gas emissions are low level. Small gas and ash emission events continue to occur daily. Deformation of the south side of the dome is continuing at a high but constant rate. New material is extruding from a point near the head of and on the south margin of the active lobe (as stated in the October 11 advisory).

Report at 1100, Wednesday, November 23, 1983 (*note: last update of month*)

Seismicity continues at slightly elevated levels. Gas emissions are low level. Small gas and ash emission events continue to occur daily. Crews were able to work in the crater for a few hours Monday afternoon; however, by Tuesday morning the Pacific Northwest had socked in again. The advisory issued on October 11 remains in effect.

DECEMBER 1983**VOLCANIC AND SEISMIC ACTIVITY AT MOUNT ST. HELENS**

U.S. Geological Survey and University of Washington
 Vancouver and Seattle, Washington

Report at 1130, Thursday, December 1, 1983

New material continues to extrude from a point near the head of and on the south margin of the May 1983 lobe (as stated in the October 11 advisory). Seismicity has increased slightly to moderate levels. Gas emissions are low level. Field crews were not able to work in the crater yesterday due to high winds. Measurements on Tuesday show that deformation on the dome's southeast sector continues. Small gas and ash emissions continue to occur daily.

Report at 0900, Friday, December 2, 1983

New material continues to extrude from a point near the head of and on the south margin of the May 1983 lobe (as stated in the October 11 advisory). Seismicity is continuing at moderate levels. Gas emissions are low level. Field crews worked in the crater yesterday, and measurements of the lava dome show that deformation of the southern sector of the dome continues. Small gas and ash emissions continue to occur daily.

Report at 0900, Monday, December 5, 1983

New material continues to extrude from a point near the head of and on the south margin of the May 1983 lobe (as stated in the October 11 advisory), where a spine has been growing slowly. Seismicity is continuing at moderate levels. Gas emissions measured last week were low level. Field crews worked in the crater on Saturday and measurements of the lava dome show that deformation of the southern sector of the dome continues. Small gas and ash emissions continue to occur daily.

Report at 1130, Tuesday, December 6, 1983

New material continues to extrude from a point near the head of and on the south margin of the May 1983 lobe (as stated in the October 11 advisory), where a spine has been growing slowly. Seismicity is continuing at moderate levels. Gas emissions measured last week were low level. Field crews were unable to enter the crater on Monday due to inclement weather. Small gas and ash emissions continue to occur daily.

Report at 1400, Wednesday, December 7, 1983

New material continues to extrude from a point near the head of and on the south margin of the May 1983 lobe (as stated in the October 11 advisory). Seismicity is continuing at moderate levels. Gas emissions measured last week were low level. Small gas and ash emissions continue to occur daily.

Report at 1400, Thursday, December 8, 1983

New material continues to extrude from a point near the head of and on the south margin of the May 1983 lobe (as stated in the October 11 advisory). Seismicity is continuing at moderate levels. Gas emissions measured last week were low level. Small gas and ash emissions continue to occur daily.

Report at 1130, Friday, December 9, 1983

New material continues to extrude from a point near the head of and on the south margin of the May 1983 lobe (as stated in the October 11 advisory). Seismicity has returned to slightly elevated levels. Gas emissions measured last week were low level. Gas and ash emissions continue to occur daily.

Report at 0800, Monday, December 12, 1983

Seismicity is slightly elevated. Gas emissions are also slightly elevated. New material continues to extrude from a point near the head of and on the south margin of the May 1983 lobe (as stated in the October 11 advisory). Gas and ash emissions continue to occur daily.

Report at 1030, Tuesday, December 13, 1983

Seismicity remains slightly elevated. Gas emissions are also slightly elevated. New material continues to extrude from a point near the head of and on the south margin of the May 1983 lobe (as stated in the October 11 advisory). Gas and ash emissions continue to occur daily.

Report at 1030, Wednesday, December 14, 1983

Seismicity remains slightly elevated. Gas emissions are also slightly elevated. New material continues to extrude from a point near the head of and on the south margin of the May 1983 lobe (as stated in the October 11 advisory). Gas and ash emissions continue to occur daily. Due to inclement weather, Geologic Division crews have not been able to get into the crater in the last eight days.

Report at 1100, Thursday, December 15, 1983

Seismicity remains slightly elevated. Gas emissions are also slightly elevated. New material continues to extrude from a point near the head of and on the south margin of the May 1983 lobe (as stated in the October 11 advisory). Gas and ash emissions continue to occur daily. Due to inclement weather, Geologic Division crews have not been able to get into the crater in the last nine days.

Report at 1100, Friday, December 16, 1983

Seismicity remains slightly elevated. Gas emissions are also slightly elevated. New material continues to extrude from a point near the head of and on the south margin of the May 1983 lobe (as stated in the October 11 advisory). Gas and ash emissions continue to occur daily. Crews were unable to reach the crater again yesterday. Improving weather conditions are allowing crews to work in the crater today.

Report at 1100, Monday, December 19, 1983

Seismicity and gas emissions remain at a slightly elevated level. Deformation rates have slowed some over the last few weeks. The October 11 advisory remains in effect.

Report at 0930, Tuesday, December 20, 1983

Seismicity and gas emissions remain at slightly elevated levels. Small gas and ash emission events continue to occur several times per day. Deformation rates have slowed some over the last few weeks. The October 11 advisory remains in effect.

Snow showers in the Portland/Vancouver area prevented helicopters from flying yesterday. Improving conditions, expected late today or tomorrow, should allow crews to reach the mountain later this week.

Report at 1200, Thursday, December 22, 1983

Seismicity and gas emissions remain at slightly elevated levels. Small gas and ash emission events continue to occur several times per day. Deformation rates have slowed some over the last few weeks. The October 11 advisory remains in effect.

A break in the weather conditions enabled deformation crews to continue their tasks in the crater

Report at 0830, Friday, December 23, 1983

Seismicity and gas emissions remain at slightly elevated levels. Small gas and ash emission events continue to occur several times per day. Deformation rates on the SE side of the dome have slowed some over the last few weeks; however, rates on the North side of the dome have increases during the last week. The October 11 advisory remains in effect.

Clear, cold weather is continuing. Crews plan to work in the crater again today.

Report at 0930, Tuesday, December 27, 1983

Seismicity and gas emissions remain at slightly elevated levels. Small gas and ash emission events continue to occur several times per day. Deformation rates on the SE side of the dome have slowed some over the last few weeks; however, rates on the North side of the dome have increases during the last week. The October 11 advisory remains in effect.

High winds prevented helicopter landings in the crater on Friday. However, WRD crews were able to work at lower elevations around the mountain. Crews took the 24th and 25th off. The snow, sleet and freezing rain which began Saturday, kept crews from working on Monday. Continuing snow in Vancouver and in the mountains will probably keep crews in the office today.

Report at 1030, Wednesday, December 28, 1983

Seismicity and gas emissions remain at slightly elevated levels. Small gas and ash emission events continue to occur several times per day. Deformation rates on the SE side of the dome have slowed some over the last few weeks. Rates on the north side of the dome have increases slightly during the last week.

The October 11 advisory remains in effect. However, the center of activity has moved northward from source mentioned in that advisory.

Continuing snow in Vancouver and in the mountains kept crews in the office yesterday.

Report at 1030, Thursday, December 29, 1983

Seismicity and gas emissions remain at slightly elevated levels. The October 11 advisory remains in effect. However, the center of activity has moved northward from source mentioned in the advisory.

Crews were in the field monitoring the mountain yesterday.

Report at 0930, Friday, December 30, 1983

Seismicity and gas emissions remain at slightly elevated levels. Small gas and ash emission events continue to occur several times a day. Deformation of the SE side of the dome has decreased over the last month. Deformation rates on the north side of the dome have increase over the last few weeks, but remains slower than deformation rate on the SE side.

Crews were unable to work at the mountain yesterday.

The following Information Supplement was issued this morning at 1130.

Mount St. Helens..... December 30,
1983

Information Supplement to the Daily Update

Since the last Eruption Advisory of October 11, the lava dome in the crater of Mount St. Helens has continued to grow. New lava is being added to both the interior and the exterior of the dome. The southeast sector of the dome continues to be the most mobile portion of the dome, but its rate of spreading decreased in November. Beginning in mid-December, increased rates of spreading, incandescence and ground cracking have been observed in the north and northeast sectors of the dome. Seismicity has generally been slightly elevated, occasionally increasing to moderate levels for brief periods of time. The rates of gas emissions have been higher for the past 3 weeks than during November. Gas and ash events continue to occur several times each day, as they have for many months.

Fresh snow covers most of the crater floor to depths of at least 15 feet or more. About 12 feet of snow blankets the floor north of the dome. More than 50 feet of snow from past winters underlies the fresh snow in some parts of the inner crater. Rockfalls and small explosions do not normally pose hazards beyond the crater, but volcanically-induced rapid snowmelt could generate mudflows during the current dome-building activity.

The recent resumption of activity in the northeast part of the dome is the latest episode in the continuous dome-building eruption that has characterized Mount St. Helens since February 1983. This eruption contrasts with the short-lived, episodic dome growth eruptions that were observed from 1980-1982. The overall rate of lava extrusion in the crater, roughly 1 million cubic meters a month, has not changed since October 1980. The chemical composition of the new lava closely resembles that of the dacitic lava of previous dome growth episodes.
