Via E-mail and Mail

January 19, 2009
Job No. 2947.100

BGC
BERLOGAR
GEOTECHNICAL
CONSULTANTS

Oakhurst Geologic Hazard Abatement District
c/o Permco Engineering
5375 Clayton Road
Concord, California 94521

Attention: Mr. Rick Angrisani

Subject: Slope Inclinometer Plots and
Observations of Progressive Offset to V ditches
Open Space Slope Below Lots 59 through 61
Pebble Beach Drive
Clayton, California

Gentlemen:

INTRODUCTION

The purpose of this letter is to present the recent slope inclinometer plots and observations made during the annual site reconnaissance performed as part of our monitoring of the open space slope located downslope of Pebble Beach Drive in the Peacock Ridge subdivision portion of the Oakhurst development in Clayton, California. In accordance with our proposal dated October 25, 2006, we have been monitoring suspected subsurface movement of the open space slope below Lots 59 through 61, which are located along the top of slope on the northeast side of Pebble Beach Drive.

BACKGROUND

To date we have been monitoring the two slope inclinometers installed at the subject slope since the baseline readings in March 2007. The reported data shows continual deformation of slope inclinometer casing SI-2 at a depth of about 72. As data has been collected from the subject area, we have transmitted that data to you along with our opinions that the deformation is progressing and the area of landsliding is larger than originally apparent. The rapid development of surface indications of landslide movements such as deformation and cracking of pavement and sidewalks along Pebble Beach Drive, horizontal separations of driveways on both sides of Pebble Beach Drive and progressive cracking and offset of the concrete lined V-ditches traversing the open space slope were discussed in our February 11, 2008 letter.

We recommended performing additional subsurface investigations to better define the impacted area and to expand the area of slope monitoring in our report dated August 10, 2007 and in letters dated November 14, 2007 and February 11, 2008. Additionally, we have submitted proposals dated November 29, 2007 and May 12, 2008 to perform this work.

In response to the deformations previously observed and subdrain discharges discussed in our March 6, 2008 memo (BGC Job No. 2947.101), at your authorization, we initiated the installation of three horizontal drains within the area of suspected slope movement in February and March of 2007. The purpose of the horizontal drains was to attempt to slow or retard the rate of deformation by lowering the (anticipated) groundwater levels in the impacted area. This operation was not successful because groundwater was not encountered.

SLOPE INCLINOMETER PLOTS

As part of our quarterly monitoring program for the subject slope, slope inclinometer readings were recently taken on October 22, 2008. Slope Inclinometer SI-1 is located along Pebble Beach Drive adjacent to Lot 60 and SI-2 is located on the open space slope below Lot 60. Slope Inclinometer SI-1 does not show definitive deformation. The plots for SI-2 show continual deformation of the slope inclinometer casing at a depth of about 72 feet. The shape and character of the plot of Slope Inclinometer SI-2 is clearly the result of landslide movement. Since the baseline readings on February 20, 2007, the landslide has deflected the slope inclinometer casing about 1½ inches. Additionally, the rate of deformation of the SI-2 casing has increased over the past two readings and is currently displacing the casing at a rate between about 1 and 1¼ inch per year. The Plots for SI-1 and SI-2 are presented on Plates 2 and 3, respectively.

SURFACE OBSERVATIONS

We recently performed our annual site reconnaissance on October 23, 2008. We observed that the street section along Pebble Beach Drive had recently been slurry sealed and the cracks discussed in our February 11, 2008 letter were no longer visible. The separations between driveways and the sidewalk and gutter and the cracking of the sidewalk are generally about the same as previously observed. On the open space slope, we observed that the right-lateral offset of the concrete v-ditches below Lot 59 has continued. We previously measured two areas of V-ditch offset below Lot 59 that showed about 1 to 1½ inches at each location. These cracks now show up to about 1½ to 2 inches of right lateral offset. Additionally, the next V-ditch downslope of these offset cracks is also right-laterally offset about ½ inch at the location where a gap had been previously filled with concrete. The approximate locations of offset to the V-ditches are shown on Plate 1.

CONCLUSIONS AND RECOMMENDATIONS

The information provided to date by our on-going slope monitoring program indicates that a landslide is moving below a substantial portion of the development. If this landslide is not stabilized, affected homes may be seriously damaged and perhaps, in some cases, totally destroyed. It is expected that the landslide will continue to move and exhibit further definition at the ground surface within a short period of time. The recent readings show that the rate of deformation of the slope inclinometer casing SI-2 has increased from previous readings.

As stated in our November 29, 2007 proposal, the area of distress appears to be much larger than originally believed. Therefore, additional investigation and expanded slope monitoring should be performed as soon as possible to better define the problem area and to gather critical information needed for the design of landslide stabilization measures.

We trust this provides you with the information you require at this time. Should you have any questions or concerns, please feel free to give us a call.

Respectfully submitted,

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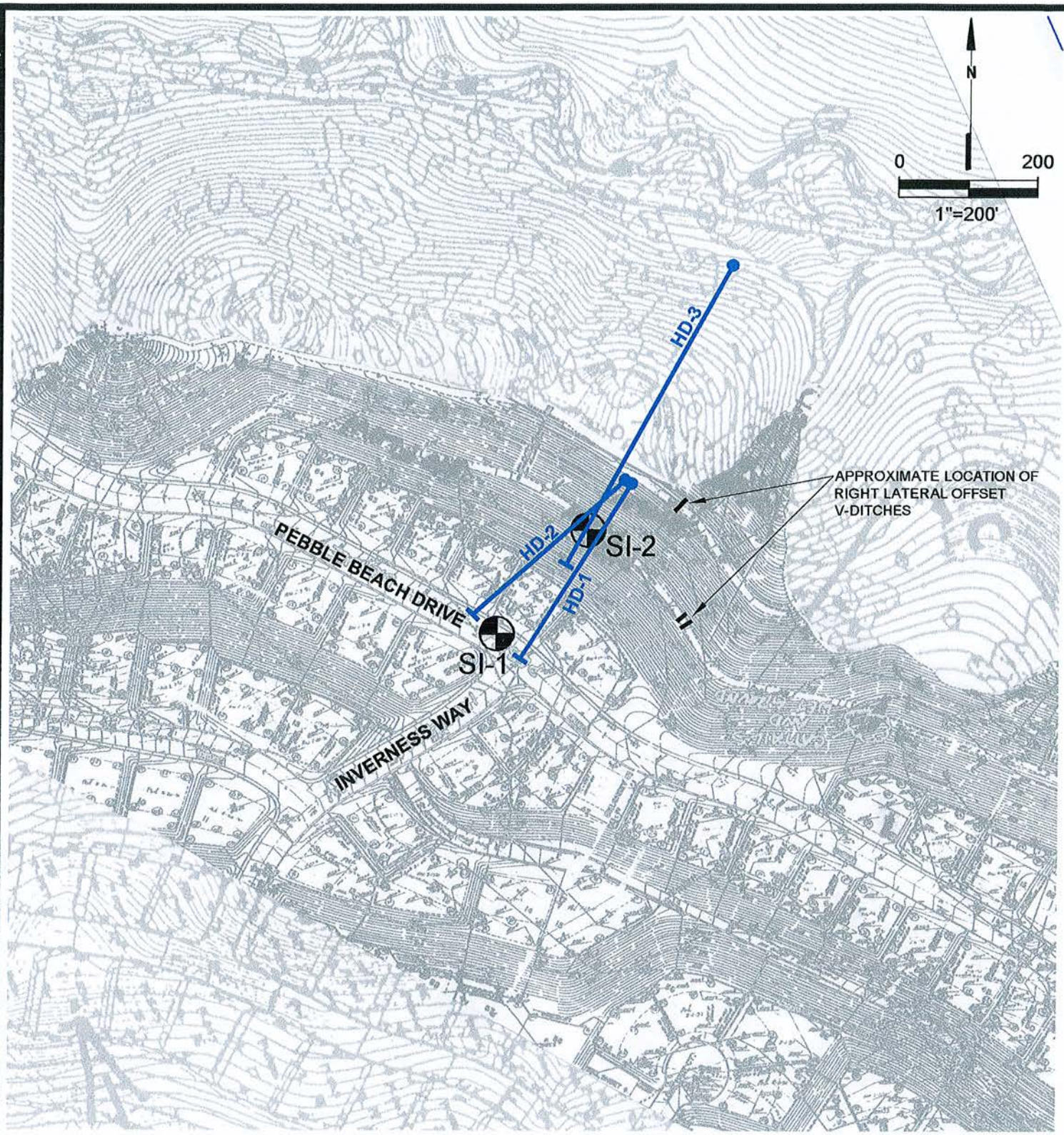
Attachments:
Plate 1 – Site Plan
Plate 2 – Slope Inclinometer Plots SI-1
Plate 3 – Slope Inclinometer Plots SI-2

Copies: Addressee: (3)

2947.100/21705.doc



JOB NUMBER: 2947.101 DATE: 3-14-08 DRAWN BY: CC CHECKED BY:

EXPLANATION

SI-2 — SLOPE INCLINOMETER LOCATION

HD-3 — HORIZONTAL DRAIN STARTING POINT AND VECTOR

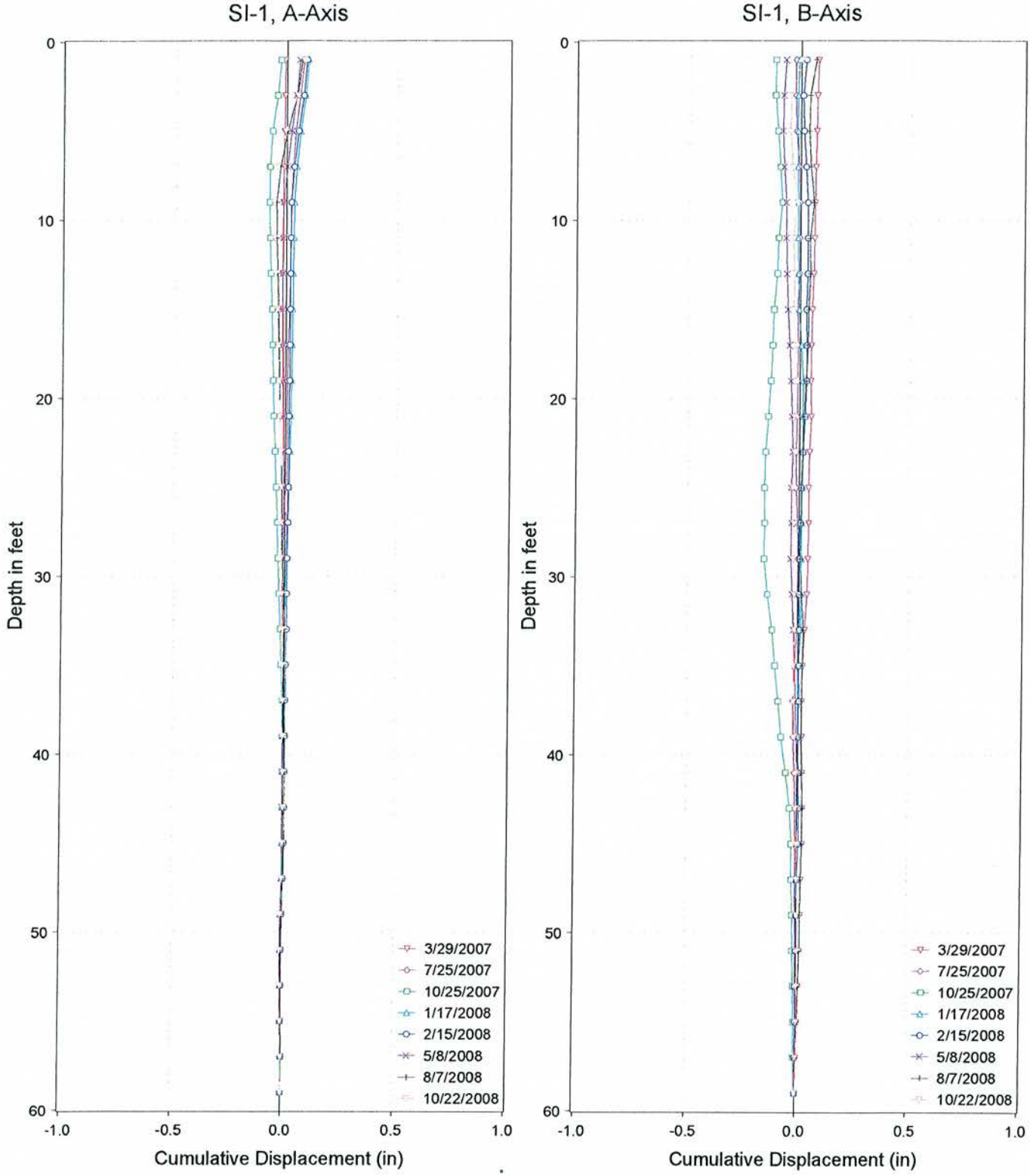
SITE PLAN

OPEN SPACE SLOPE
BELOW PEBBLE BEACH DRIVE
CLAYTON, CALIFORNIA
FOR
OAKHURST GEOLOGIC HAZARD
ABATEMENT DISTRICT

Berlogar Geotechnical Consultants
SOIL ENGINEERS * ENGINEERING GEOLOGISTS

BASE: COMPILATION OF RECORD PLANS UDI-TETRAD DATED 10-7-96. AND FIGURE IIIA-2 HALLENBECK 1988

PLATE 1



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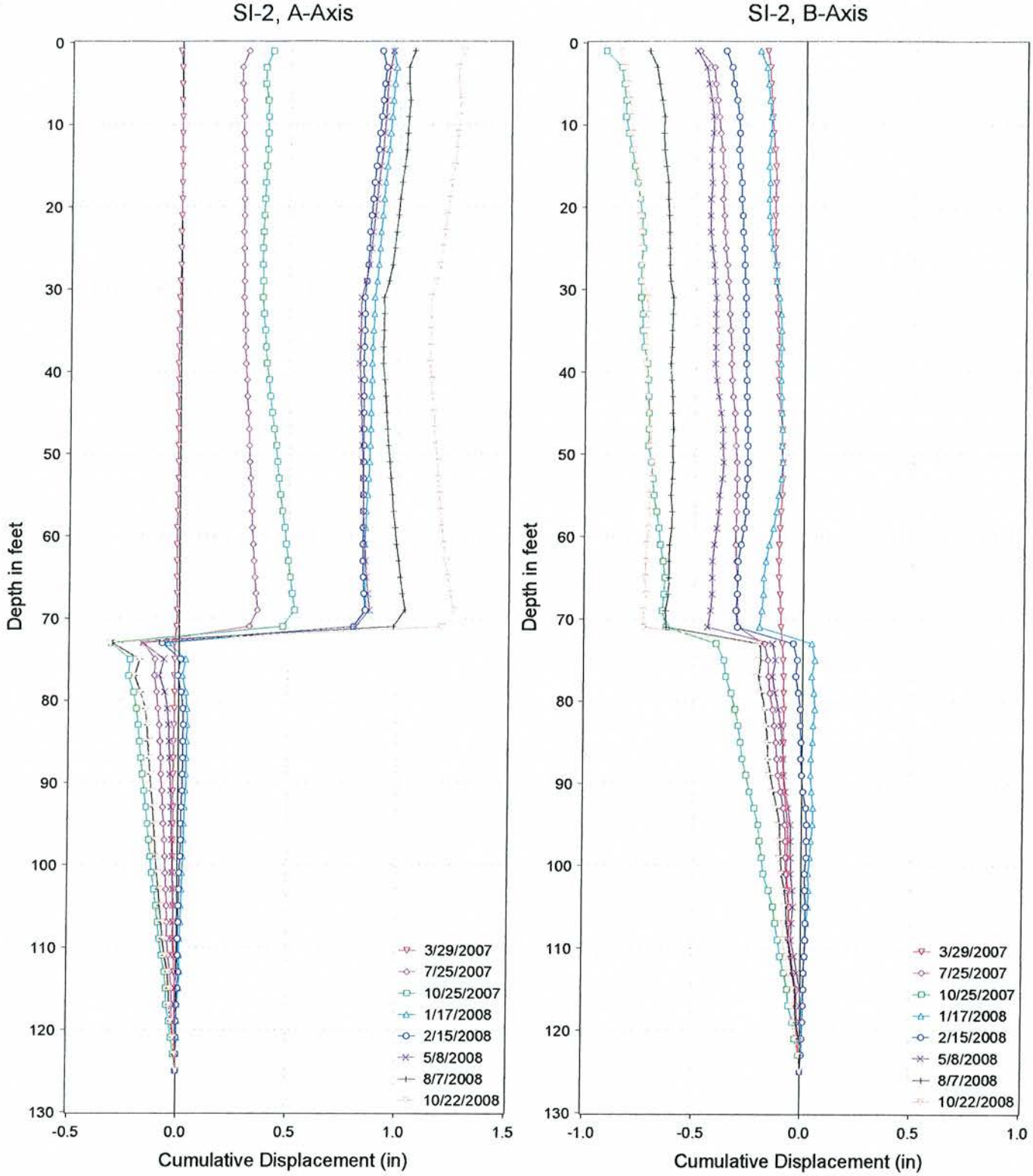
2947.100 - Open space slope below
lots 59 through 61
Base Line Reading Date: 2/20/07
A+= N49E B+= S41E

PLATE 2



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2947.100 - Open space slope below
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A+= N41E B+=S49E

PLATE 3