

# INCIDENT ACTION PLAN

Be brief and concise with your entries

<b>Location</b> <b>Bayou Corne</b> <b>Sink Hole</b>	<b>Control Level</b> <b>Company Supervisory</b>	<b>Operational Period</b> <b>From 4/1/13</b> <b>To 4/2/13</b>
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<p><b>1.0 SITUATION</b> Disease, community, environment</p> <p>PROMPTS: Weather, disease trends, Resources, Hazards &amp; safety</p> <p>REFERENCE: Maps, weather reports, Sitreps, appreciation, warnings, alerts</p>	<p><b>CURRENT</b> Partly Cloudy</p> <hr/> <p><b>PREDICTION</b> A mix of clouds and sunshine. 30% chance of precipitation. High Temperature near 80.</p>
<p><b>2.0 OBJECTIVES (or MISSION)</b></p> <p>PROMPTS: Time &amp; space</p> <p>REFERENCE: Appreciation – control options, courses open to disease</p>	<p><b>CURRENT</b> <b>Objective 1 - Gas Monitoring:</b></p> <p>3 Gas Monitors have been set up in the field and are obtaining data on a continuous basis.</p> <p>The monitors are running on batteries which must be changed out every morning. Three monitors are located in the swamp and are required to be reached via airboats launched from TBC facilities.</p> <p>The continuous monitoring data is collected at an office trailer located at Texas Brine Grand Bayou Facility. Monitoring the information on a 24 hours basis. Monitoring is being recorded for LEL, VOC, H2S and O2.</p> <p><b>Respec Mining &amp; Energy:</b> In-place inclinometers and tilt meter monitoring system, weekly report</p> <p><b>Objective 2-</b> Elevation survey taking place once a week.</p> <p><b>Objective 3-</b> Sinkhole observation. <b>Continuing to monitor slough on the sinkhole. Operations are being performed on the sinkhole today.</b></p> <hr/> <p>ALTERNATE</p>

<p><b>3.0 EXECUTION</b>    add safety information as appropriate</p>
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<p><b>GENERAL OUTLINE</b></p> <p>PROMPTS: Strategies &amp; tactics (current/proposed/alternate)</p>	<p><b>Safety Information: See Attached Safe Work Rules Reference IAP dated 8/9/12</b></p> <p><b>Additional to our Safe Work Rules for this project we are adding the awareness of insects, reptiles and animals.</b></p>
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<p>REFERENCE: Appreciation, Control Options</p>	<p><b>Inspect location for flammability</b>  <b>Daily Safety Meetings</b>  <b>PPE Required on site: Respirator w/ VOC Cartridge, Gloves for sampling, eye protection, life preservers, hearing protection.</b></p>
<p>GROUPINGS</p>	<p><b>NA</b></p>
<p>TASKS Including PR &amp; Media</p>	<p><b>Same as above</b></p>
<p>COORDINATING INSTRUCTIONS</p> <p>PROMPTS: Timings, routes, assembly areas, staging areas</p>	<p><b>Texas Brine Grand Bayou Facility will be used as staging area.</b></p>
<p><b>4.0 ADMINISTRATION</b> (Logistics support)</p> <p>PROMPTS: Unit names, locations, contact names, phone no's, timings, duties/tasks, routes, suppliers, quantities, status (required, organised, stand by, enroute)</p>	
<p>SUPPLY WHO, WHAT, WHERE, WHEN of resources not readily available</p>	<p><b>NA</b></p>
<p>GROUND SUPPORT Transport of personnel, traffic mgt, refuelling, mechanical repair/maintenance</p>	<p><b>NA</b></p>
<p>COMMUNICATIONS Installation, maintenance, technical advice</p>	<p><b>Cell Phone &amp; Landline Communications:</b>  <b>Kenneth Blanchard – Area Manager – 985-██████████ (985-██████████)</b>  <b>kblanchard@texasbrine.com</b>  <b>Scott Borne – Facility Manager – 985-██████████ (985-██████████)</b>  <b>sborne@texasbrine.com</b>  <b>Joel Miller, PE – Consultant – 337-██████████0 (337-██████████)</b> joel.miller@cox-internet.com  <b>Bruce Martin – Operations/PR – 713-██████████ (281-██████████)</b>  <b>bmartin@texasbrine.com</b>  <b>Mark Cartwright – Technical/Engineering – 713-██████████4 (281-██████████)</b></p>

	<b>mcartwright@unitedbrine.com</b> <b>Scott Whitelaw – Environmental/Safety – 713- [REDACTED] (713- [REDACTED])</b> <b>swhitelaw@tum.com</b>
<b>STAGING AREA/ FCP</b> Setting up, communications, staffing	<b>Texas Brine Grand Bayou Facility</b> <b>1301 Hwy 70 South, Belle Rose, La 70341</b>
<b>5.0 ADMINISTRATION (Logistics services)</b>  PROMPTS: Unit names, locations, contact names, phone no's, timings, duties/tasks, routes, suppliers, quantities, status (required, organised, stand by, enroute)	
<b>FACILITIES</b> Security, waste, cleaning	<b>NA</b>
<b>CATERING</b>	<b>NA</b>
<b>OH&amp;S/MEDICAL</b> Medical plan, first aid plan	<b>Call 911</b>
<b>FINANCE</b>	<b>NA</b>
<b>TRAVEL</b>	<b>NA</b>
<b>INDUCTION/ TRAINING</b>	<b>NA</b>
<b>ACCOMMODATION</b>	<b>NA</b>
<b>6.0 CONTROL, COORDINATION &amp; COMMUNICATION</b>	
<b>CONTROL &amp; COORDINATION STRUCTURE</b>  REFERENCE Structural Chart	<b>Plant Management Supervision / Contractor Work</b>
<b>COORDINATION &amp;</b>	<b>NA</b>

<b>LIAISON</b>  Local knowledge, police, agency reps, emergency mgt reps	
<b>COMMUNICATIONS</b>  PROMPTS Communications structure, operational comms plan, information mgt	<b>Plant Management – Contractor Communication via Cell Phone</b>

<b>EXTRAS</b>	
<b>Attachments</b> PROMPTS: maps, weather, organisational charts, resources, comms diagram	<b>Current Weather Safe Work Rules</b>
<b>Plan developers</b> PROMPTS PO, Logs Mgr, Controller	<b>NA</b>
<b>Approval</b> Controller, Ops Director	<b>TBC Company Rep: William Booher</b> <b>FOSC:</b> <b>SOSC:</b> <b>POSC:</b>

**Belle Rose, Louisiana, United States**

**Today's Forecast: Monday, 1 Apr 2013**

**80°F**  
59°F

**Sky Conditions:** Isolated Thunderstorms  
**Sunrise:** 6:53 AM **Sunset:** 7:23 PM  
**Wind:** WSW (258°) @ 4Mph  
**Precipitation Probability:** 30%



[View your complete Local Weather »](#)

**Extended Forecast [Full 10-Day Forecast »](#)**

<b>Tuesday</b> 2 Apr 2013	<b>Wednesday</b> 3 Apr 2013	<b>Thursday</b> 4 Apr 2013	<b>Friday</b> 5 Apr 2013
			
Partly Cloudy 79°F 61°F	Thunderstorms 68°F 61°F	Showers 72°F 51°F	Mostly Cloudy 72°F 51°F

**Detailed Forecast**

**Today:**

A mix of clouds and sun with the chance of an isolated thunderstorm in the afternoon. High near 80F. Winds light and variable. Chance of rain 30%.

**Tonight:**

Isolated thunderstorms during the evening, then skies turning partly cloudy overnight. Low 59F. Winds light and variable. Chance of rain 30%.

**Tomorrow:**

Mix of sun and clouds. Highs in the upper 70s and lows in the low 60s.

TBC Oxy Grand Bayou Sinkhole Management Plan

Phase Two- Crude Oil/Vegetation/Debris Removal

10-12-2012

(THIS PLAN CAN BE ADJUSTED BY TBC FOR WEATHER RELATED ISSUES, OR SITE CONDITIONS)

This plan is being followed as an approach to sinkhole management. The primary focus for this plan is to:

1. Recover liquid hydrocarbons that are found on the surface of the sinkhole. By removing the free phase Hydrocarbons that are found on the surface of the sinkhole, off-site migration of these Hydrocarbons will be greatly reduced. Thus, limiting the impacts of the Hydrocarbons to the sinkhole surface and the immediate area. Additionally, the removal of the free phase Hydrocarbons will greatly reduce the "smell" associated with the sinkhole.
2. To further understand the dynamics of the sinkhole, through profiling and visual observation of the surface of the sinkhole.

Phase One focused on the removal of floating vegetation and debris within the sinkhole. To date, the vast majority of floating vegetation and debris has been cleaned and cleared off of the surface of the sinkhole area. On October 8, 2012, we began to bring on site equipment and staffing to move into Phase Two of the Sinkhole Management, Crude Oil Removal.

Crude Oil removal will take place on near the mat road that was constructed on September 24, 2012. Texas Brine began reconstruction of the mat road at well pad #3, going toward the sinkhole. This road has been constructed of river sand, filter fabric and wooden mats. The mat road has been constructed in the previous footprint, to the outside and on the eastern side of the sinkhole.

As discussed in the Phase One Plan for Sinkhole Management, the mat road will play a vital part in our recovery of oiled vegetation and crude oil removal. Texas Brine plans to collect crude oil via physical means with skimmers, and vacuums. We will also use Air Boats to sweep the surface of the sinkhole. Texas Brine has fabricated an oil collection box that will be placed at the end of the mat road, in the water, that will assist in the collection of crude oil.

Product that is recovered will be placed into a frac tank and stored for disposal. These Frac tanks are stored near the sinkhole in an orderly fashion. The vacuum trucks that are used are inspected for leaks and drips prior to leaving the facility for disposal. Occasionally, the Long-reach boom and operator may have to go back out on the mat road to sweep in additional debris that has been swept in by the air boats. The additional debris will be handled as discussed in Phase One. As a safety precaution, the truck driver will be instructed to remain in his vehicle with on ready should any movement be observed on the sinkhole. The truck driver will remain at/in his vehicle during the loading process. A spotter will be placed in a stationary location on Well Pad # 3 to watch for any movement of trees or debris in the sinkhole. Additionally, there will be supervision of the project entire project by TBC Employees.

Texas Brine is following the advice offered by LA DNR and pursuing the use of Oil Gator, as an in-situ remediation of crude oil in hard to reach places or in marginal places where oil may have escaped the containment boom. Texas Brine will not proceed with the use of this material or other materials until approval has been issued by the lead agency on this incident. The use of any such absorbent material will be used to augment the traditional physical oil removal procedures. The proposed use of Oil Gator will not replace the use of traditional physical oil spill removal.

If any personnel or contractors are allowed onto the sinkhole, then personal air monitoring devices will be used to monitor air quality/exposure while on the sinkhole.

The safe execution of this activity is the goal of TBC. This is why every person entering the property, must wear proper PPE (Hard Hat, Long Pants, Steel Toed Boots, and Safety Glasses).

DRAFT

April 1, 2013

Mr. Bruce Martin  
Vice President of Operations  
Texas Brine Company, LLC  
4800 San Felipe  
Houston, TX 77056

Dear Mr. Martin:

**RE: In-Place Inclinator, Tiltmeter, and Water-Level Monitoring System,  
Napoleonville Dome Weekly Report: March 23, 2013, Through March 29, 2013**

RESPEC is pleased to submit this weekly report on the in-place inclinometer (IPI), tiltmeter, and water-level monitoring system installed around the sinkhole located near the western flank of the Napoleonville Dome, Assumption Parish, Louisiana. Water-level data in this report and the attached Excel file are submitted in response to Directive #5 contained in the October 11, 2012, Third Amendment to Declaration of Emergency and Directive from the Department of Natural Resources Office of Conservation. IPI and tiltmeter data are also attached as Excel files.

Monitoring locations are illustrated in Figure 1. Graphs illustrating the tilt data, as recorded by each instrument, are provided in Figures 2 through 4. The IPI data for the X-directions and Y-directions are plotted separately in Figures 2 and 3, respectively. The tiltmeter data for both the X- and Y-directions are plotted in Figure 4. A condition reflecting no changes in ground movement plots as a horizontal line on these graphs. Note that the instruments installed are very sensitive; they can measure ground tilt to less than 1/1,000 of a degree. Inclinometer alarm levels are set at  $\pm 1.0$  degree and tiltmeter alarms are set at  $\pm 0.5$  degree.

IPI-3 has been slowly tilting toward the sinkhole over the past several weeks. On March 30 at 8:45 a.m., the system sent an amber alarm when the X-direction tilt value exceeded 1.0000 degree. All alarm recipients received the alarm either by text message or email. This constitutes a successful test of the early-warning system. Because of the expansion of the sinkhole threatening IPI-3, we are planning to move the instrument to the northwest during the week of April 1. The IPI-3 datum will be zeroed at that time.

Figure 5 shows a zoomed-in view of several IPI records focused on March 24. Several tiltmeters measured movement beginning at 14:30 with a spike in data at 16:30 in IPI-4 and IPI-3.

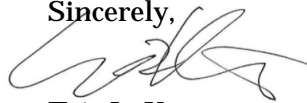
Figure 6 shows water levels recorded at Rig Access Road and Pad 3. Figure 7 shows water levels recorded at Rig Access Road and IPI-2 (Rig Access Road water level is shown in both figures for comparison to the other sites). Figure 8 shows water levels with respect to zero



datum as of March 23, 2013, at 12 a.m. As swamp water levels continue to drop, the location where Pad 3 transducer is positioned has become too shallow to measure water levels. The Pad 3 transducer will be repositioned in deeper water in the coming week.

Rig Access Road water levels indicate a 0.04 foot subsidence with respect to IPI-2. Figure 9 illustrates these changes by comparing the difference in water levels at IPI-2 and Rig Access Road. Water-level data indicate that subsidence at Rig Access Road is slowing when compared to the previous week's rates. Note that the transducer mounting post at Rig Access Road is driven into native soils approximately 20 to 30 feet from the edge of fill used to construct the new berm.

Sincerely,



Eric L. Krantz  
Engineer

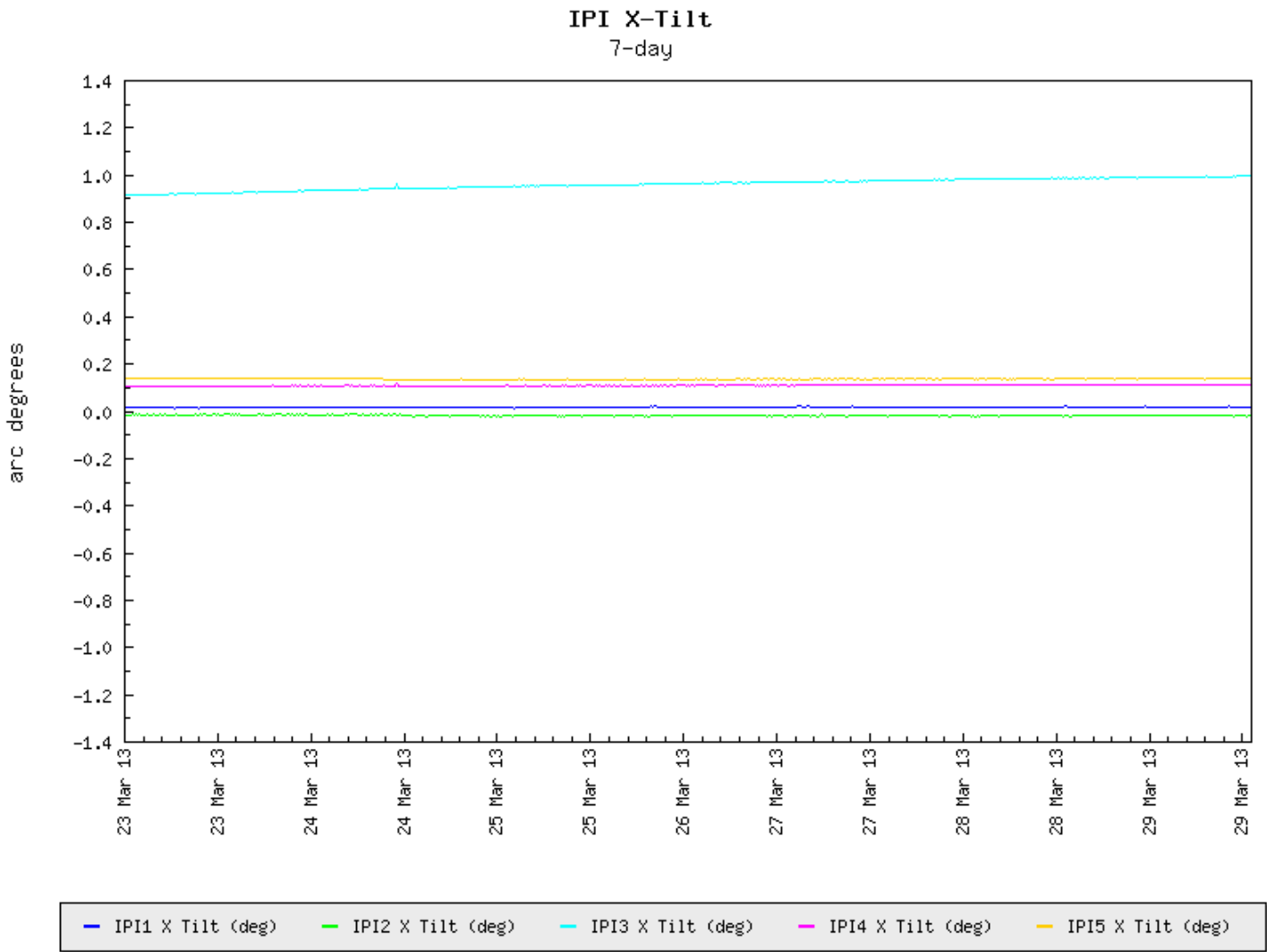
ELK:llf

Enclosure

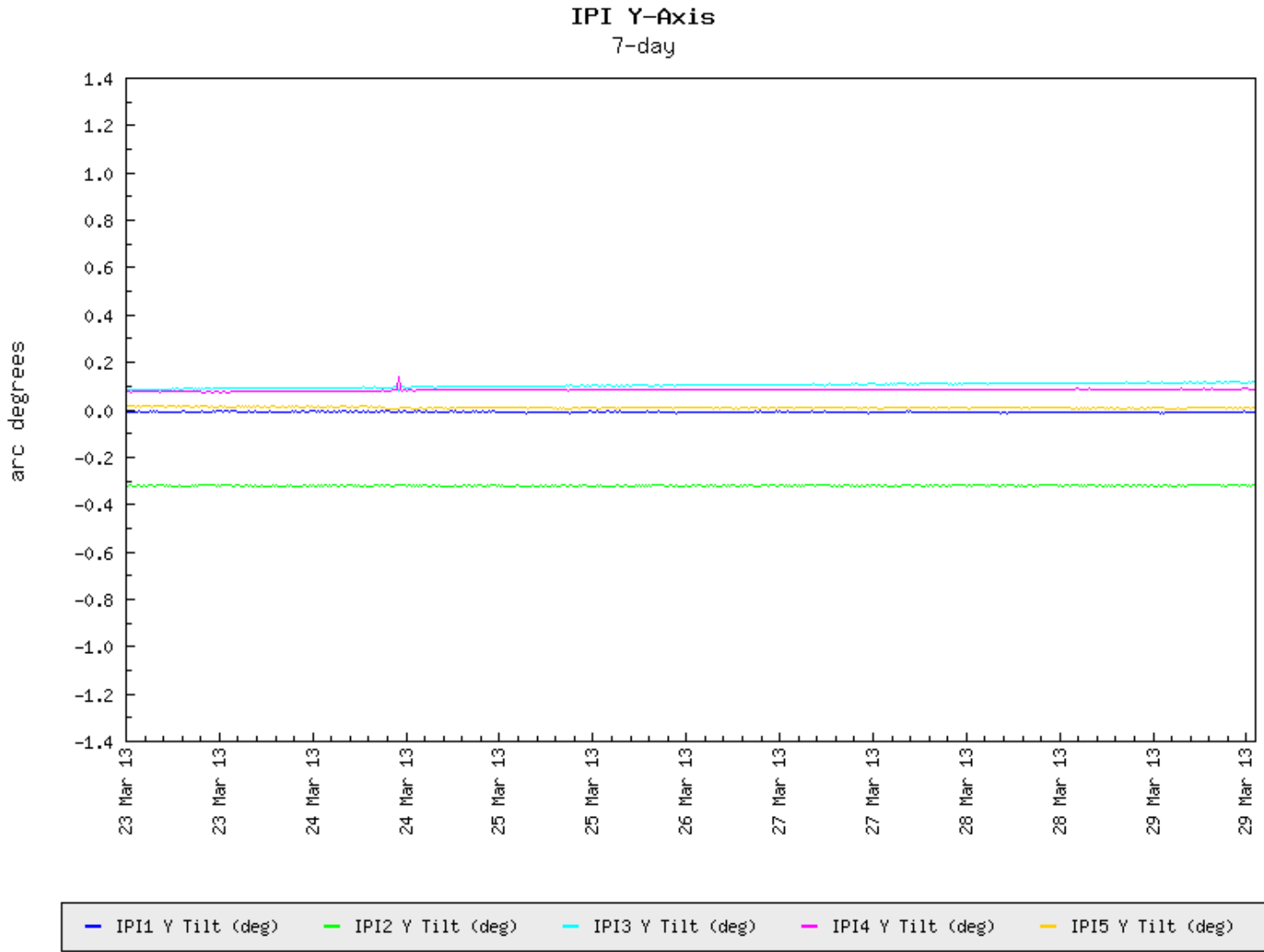
cc: Mr. Mark Cartwright, Texas Brine Company, LLC  
Mr. Scott Borne, Texas Brine Company, LLC  
Project Central File 2153 — Category C



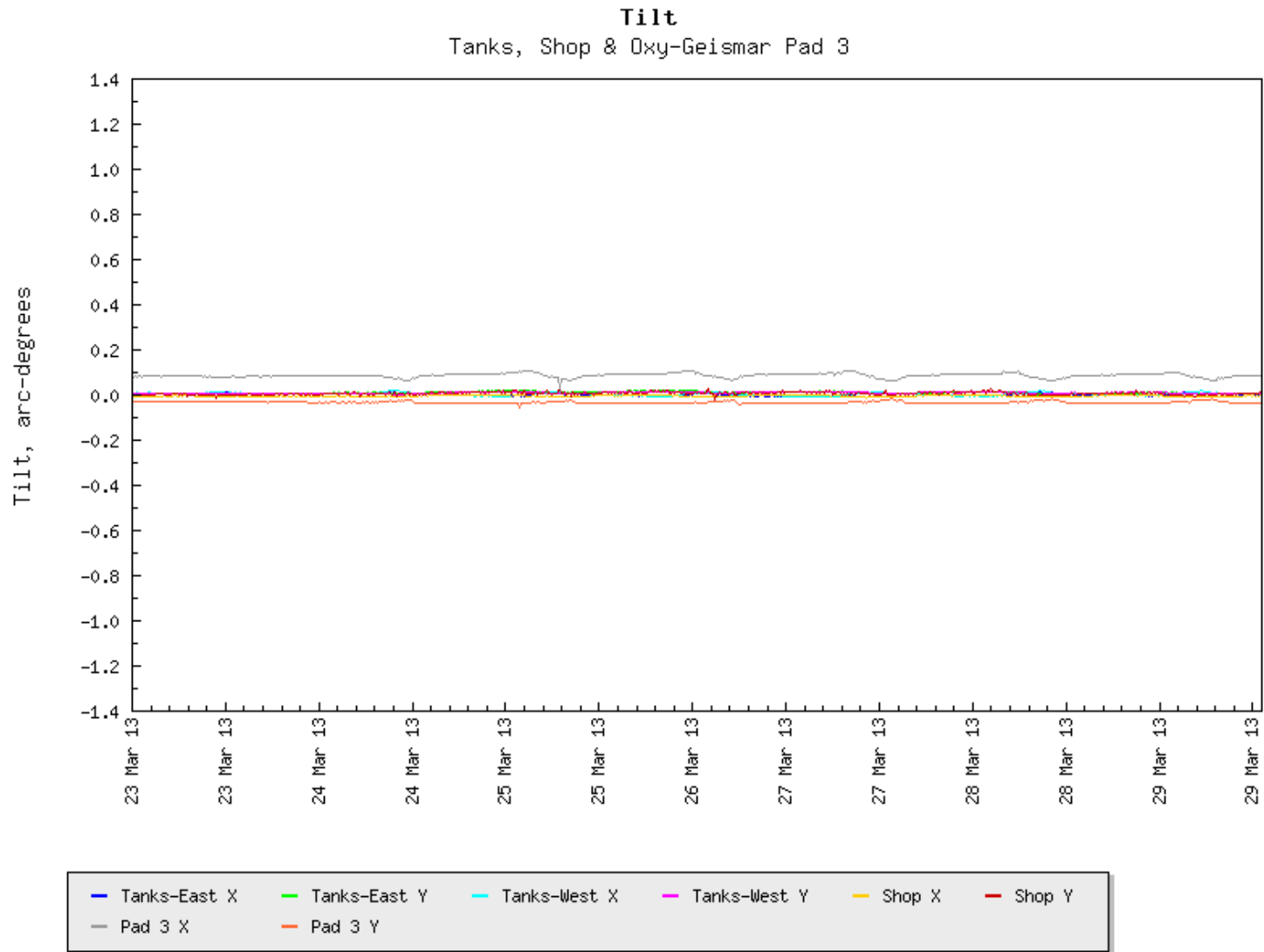
**Figure 1.** Monitoring Locations.



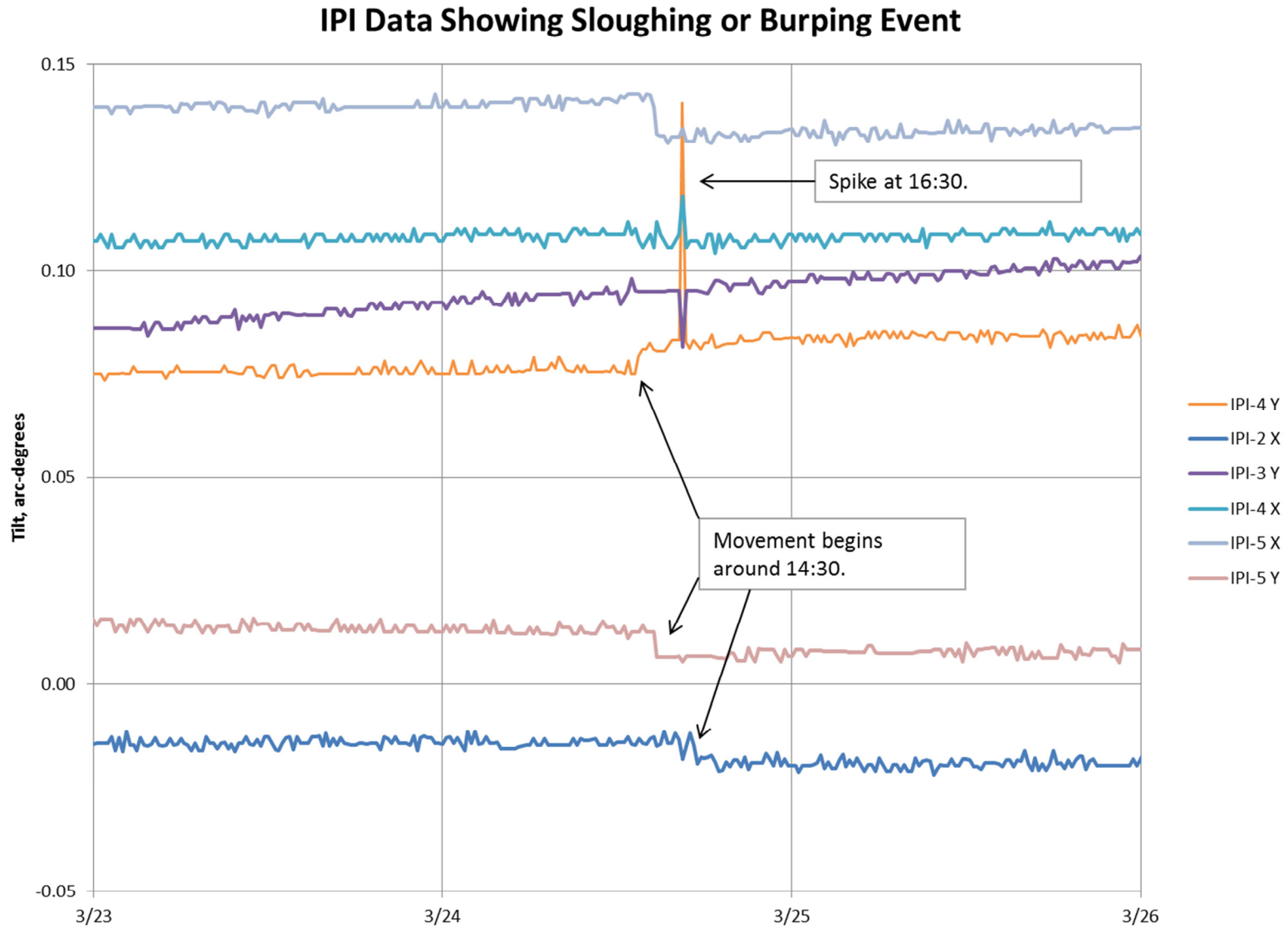
**Figure 2.** Inclinometer X-Direction Temporal Trends.



**Figure 3.** Inclinometer Y-Direction Temporal Trends.

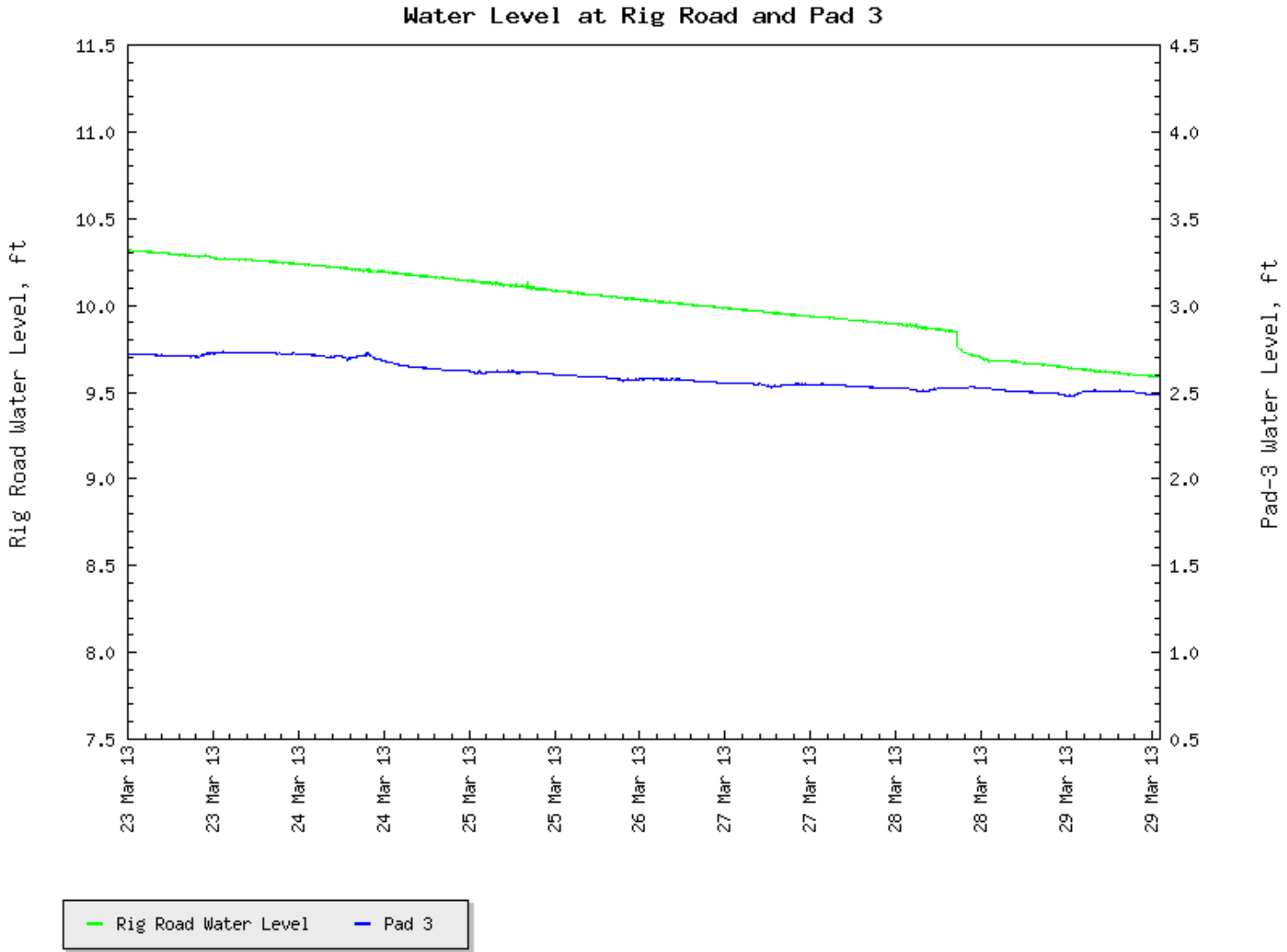


**Figure 4.** Tiltmeter Temporal Trends.

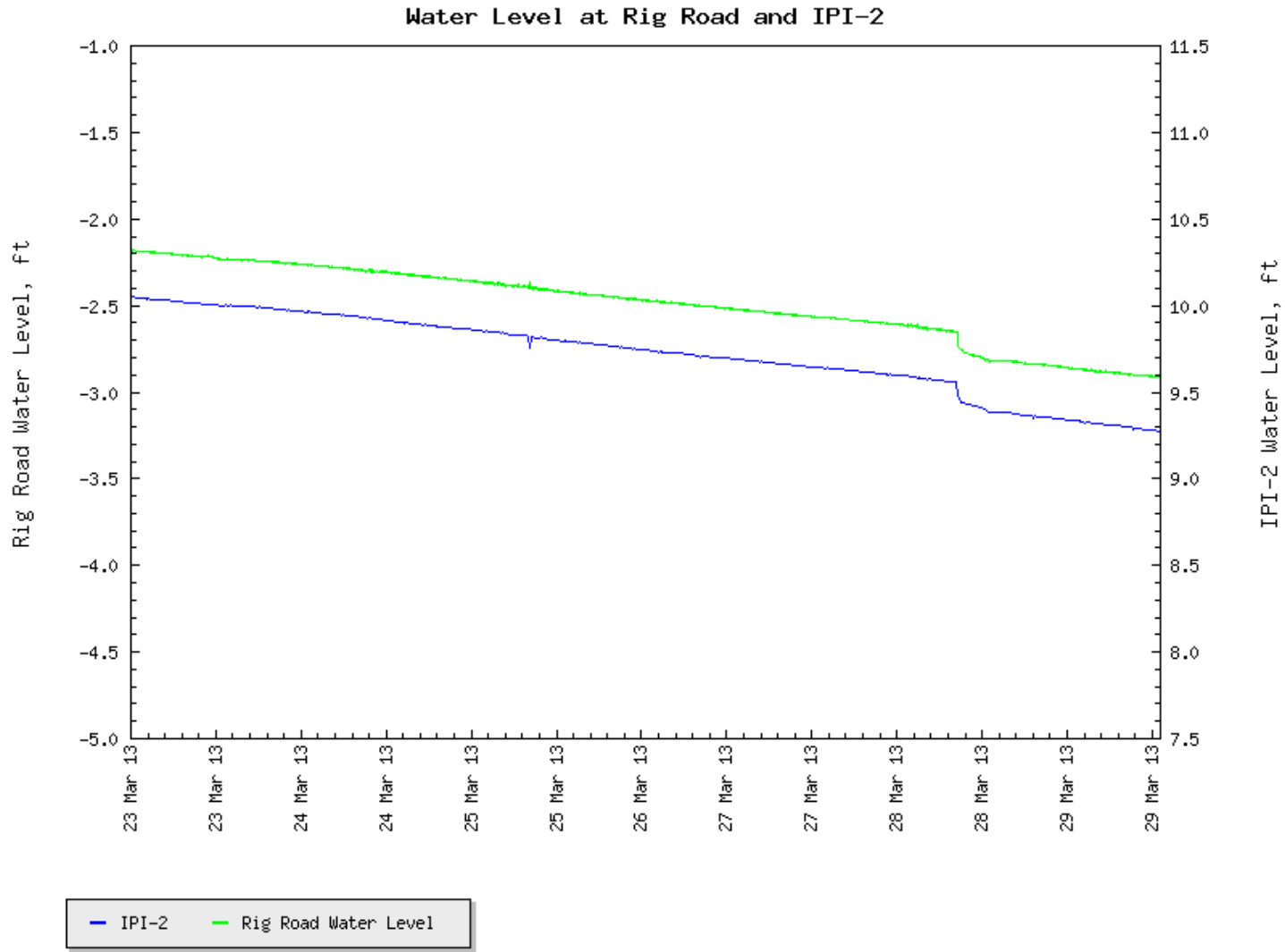


**Figure 5.** Zoomed-In View of Several Tilt Records Showing Possible Sloughing or Burping Event.



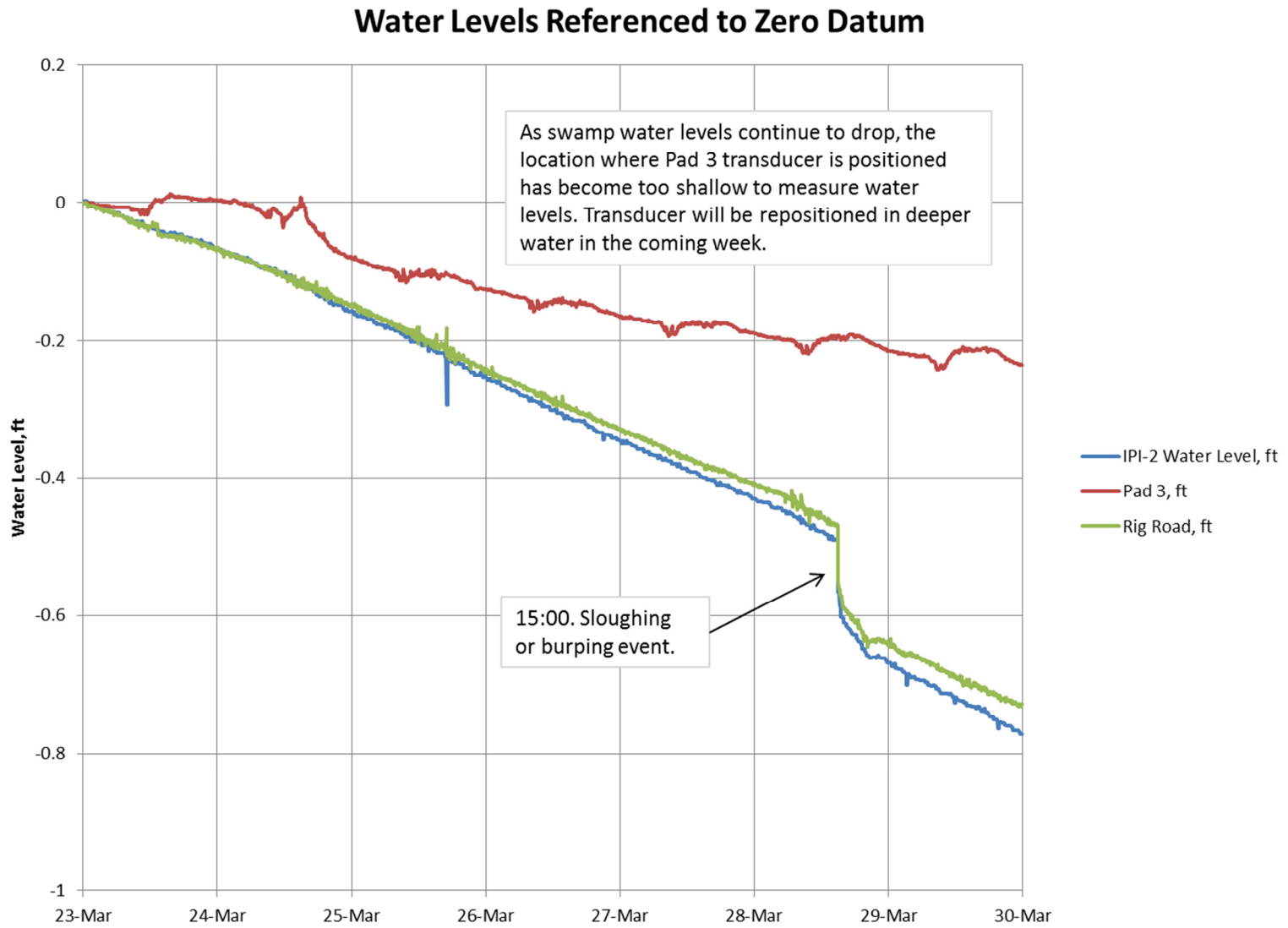


**Figure 6.** Water-Level Temporal Trends Comparing Rig Access Road Data to Pad 3 Data.

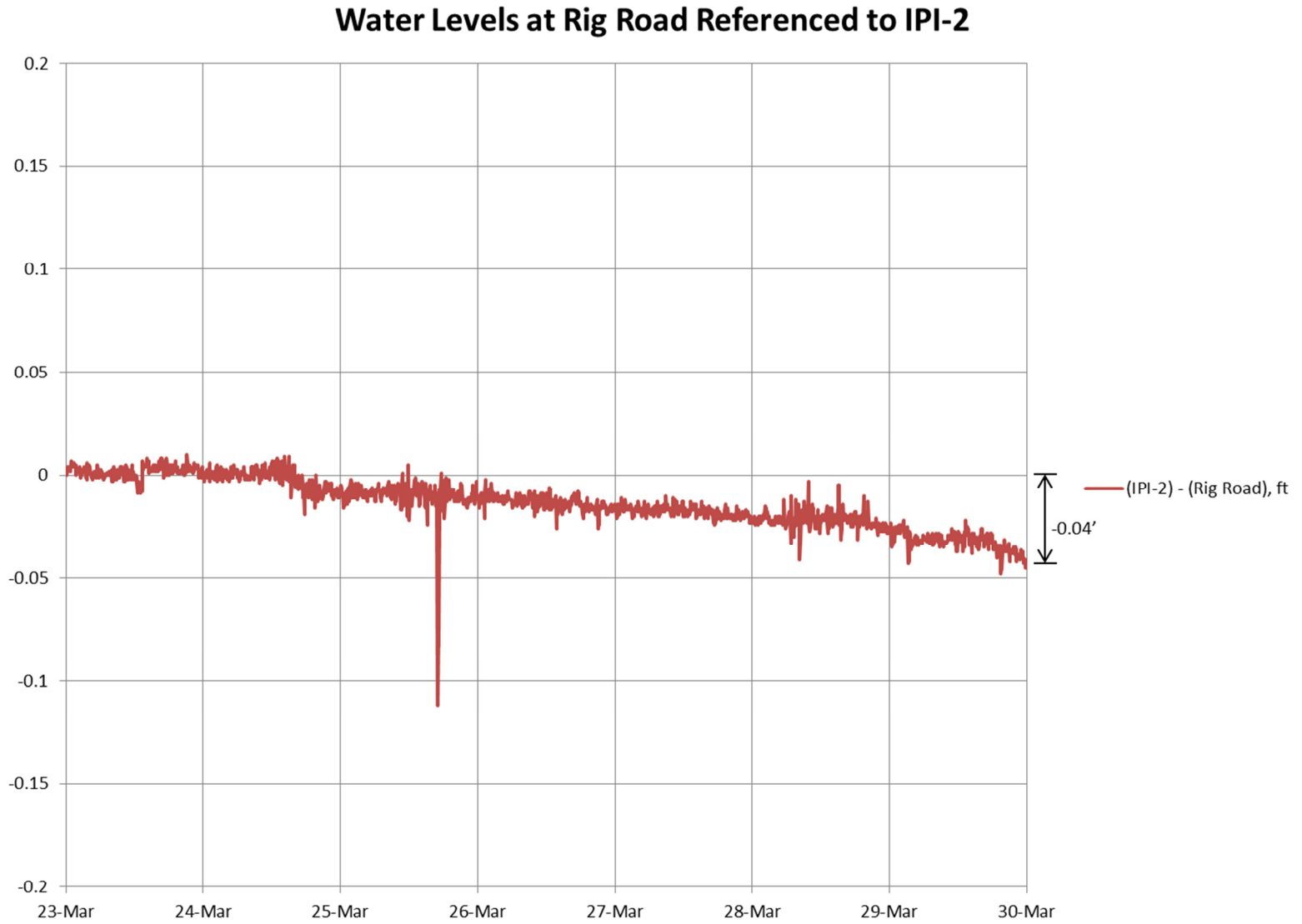


**Figure 7.** Water-Level Temporal Trends Comparing Rig Access Road to IPI-2 Data.





**Figure 8.** Water Levels Referenced to Zero Datum on March 23, 2013.



**Figure 9.** Difference in Water Levels Showing Subsidence at the Rig Access Road Transducer.