

# INCIDENT ACTION PLAN

Be brief and concise with your entries

<b>Location</b> Bayou Corne Sink Hole	<b>Control Level</b> Company Supervisory	<b>Operational Period</b> From 1/21/13      To 1/22/13
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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> Sunny</p> <hr/> <p><b>PREDICT</b> Sunny</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 <b>See Attached</b></p> <p><b>Objective 2-</b> Elevation survey taking place once a week.</p> <p><b>Objective 3-</b> Sink hole observation. <b>No Slough in / Light bubbling</b> <b>Location #3 appears to have no change.</b> No clean up on the sink hole today</p> <hr/> <p>ALTERNATE</p>

**3.0 EXECUTION** add safety information as appropriate

<p><b>GENERAL OUTLINE</b></p> <p>PROMPTS: Strategies &amp; tactics (current/proposed/alternate)</p>	<p><b>Safety Information: See Attached Safe Work Rules</b> <b>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-██████████ (337-██████████) joel.miller@cox-internet.com</b>  <b>Bruce Martin – Operations/PR – 713-██████████ (281-██████████)</b>  <b>bmartin@texasbrine.com</b>  <b>Mark Cartwright – Technical/Engineering – 713-██████████ (281-██████████)</b></p>

	<p><b>mcartwright@unitedbrine.com</b>  <b>Scott Whitelaw – Environmental/Safety – 713- [REDACTED] (713- [REDACTED])</b>  <b>swhitelaw@tvm.com</b></p>
<p><b>STAGING AREA/ FCP</b>                  Setting up, communications, staffing</p>	<p><b>Texas Brine Grand Bayou Facility</b>  <b>1301 Hwy 70 South, Belle Rose, La 70341</b></p>
<p><b>5.0 ADMINISTRATION (Logistics services)</b></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><b>FACILITIES</b>                  Security, waste, cleaning</p>	<p><b>NA</b></p>
<p><b>CATERING</b></p>	<p><b>NA</b></p>
<p><b>OH&amp;S/MEDICAL</b>                  Medical plan, first aid plan</p>	<p><b>Call 911</b></p>
<p><b>FINANCE</b></p>	<p><b>NA</b></p>
<p><b>TRAVEL</b></p>	<p><b>NA</b></p>
<p><b>INDUCTION/ TRAINING</b></p>	<p><b>NA</b></p>
<p><b>ACCOMMODATION</b></p>	<p><b>NA</b></p>
<p><b>6.0 CONTROL, COORDINATION &amp; COMMUNICATION</b></p>	
<p><b>CONTROL &amp; COORDINATION STRUCTURE</b></p> <p>REFERENCE                  Structural Chart</p>	<p><b>Plant Management Supervision / Contractor Work</b></p>
<p><b>COORDINATION &amp;</b></p>	<p><b>NA</b></p>

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

<p style="text-align: center;"><b>EXTRAS</b></p>	
<p><b>Attachments</b></p> <p>PROMPTS:: maps, weather, organisational charts, resources, comms diagram</p>	<p><b>Current Weather Safe Work Rules</b></p>
<p><b>Plan developers</b></p> <p>PROMPTS PO, Logs Mgr, Controller</p>	<p><b>NA</b></p>
<p><b>Approval</b></p> <p>Controller, Ops Director</p>	<p><b>TBC Company Rep:</b> <i>A. Corne</i>  <b>FOSC:</b>  <b>SOSC:</b>  <b>POSC:</b></p>

January 21, 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: January 12, 2013, Through January 18, 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.

Monitoring locations are shown in Figure 1. Graphs illustrating the tilt data, as recorded by each instrument, are provided in Figures 2-4. 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 1/100 of a degree. Alarm levels are set at  $\pm 1.0$  degree for all inclinometers and  $\pm 0.5$  degree for all tiltmeters. Water levels measured at IPI-2 and southwest of Pad-3 are shown in Figure 5, and an Excel file with this data is attached.

Heavy rains began on January 8, 2013. Since then, the swamp water-surface elevation has risen about 2.5 feet, which increased the overburden weight by about 150 pounds per square foot of ground surface.

IPIs 3, 4, and 5 recorded accelerated tilt this week starting on January 13 about 6 a.m. The tilt rates increased again on January 17 at approximately 10 a.m. Vectors, shown in Figure 6, indicate the resulting tilt direction and relative magnitude.

Water-level transducers recorded evidence of subsidence at Pad-3. Because the water surface elevation is the same at both transducers, a dataset calculated by taking the difference in water surface elevations recorded by transducers must be constant. Relative subsidence at a transducer location will be indicated by water levels that appear relatively deeper than those at the other location. Figure 7 illustrates long-term (1 month) water-level differences and Figure 8 illustrates recent (1 week) water-level differences between IPI-2 and Pad-3 transducers. Typically, a correlation between water-level transducers at IPI-2 and Pad-3 is excellent, as shown in Figure 7; however, on

January 13 transducers began recording differential water surface elevations, which indicates subsidence at the Pad-3 transducer. Total subsidence at the Pad-3 transducer relative to the unit at IPI-2 was approximately 0.54 feet.

Sincerely,

A handwritten signature in black ink, appearing to read 'Eric L. Krantz', written in a cursive style.

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

RSI-2153-13-013



Sinkhole survey data provided by Joel Miller & Associates. Survey date 10/30/12.

**Figure 1.** Monitoring Locations.

RSI-2153-13-014

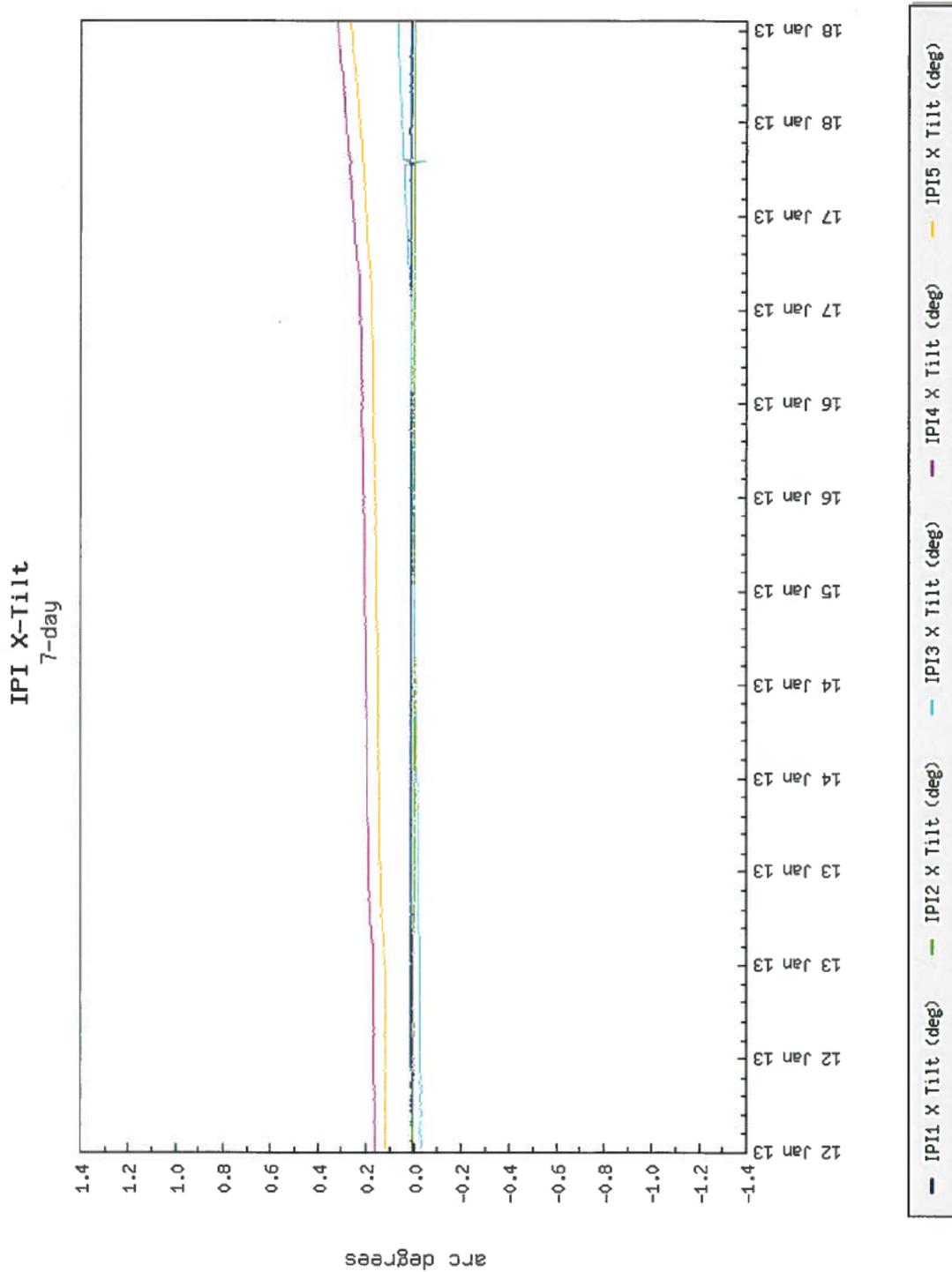


Figure 2. Inclinometer X-Direction Temporal Trends.

RSI-2153-13-015

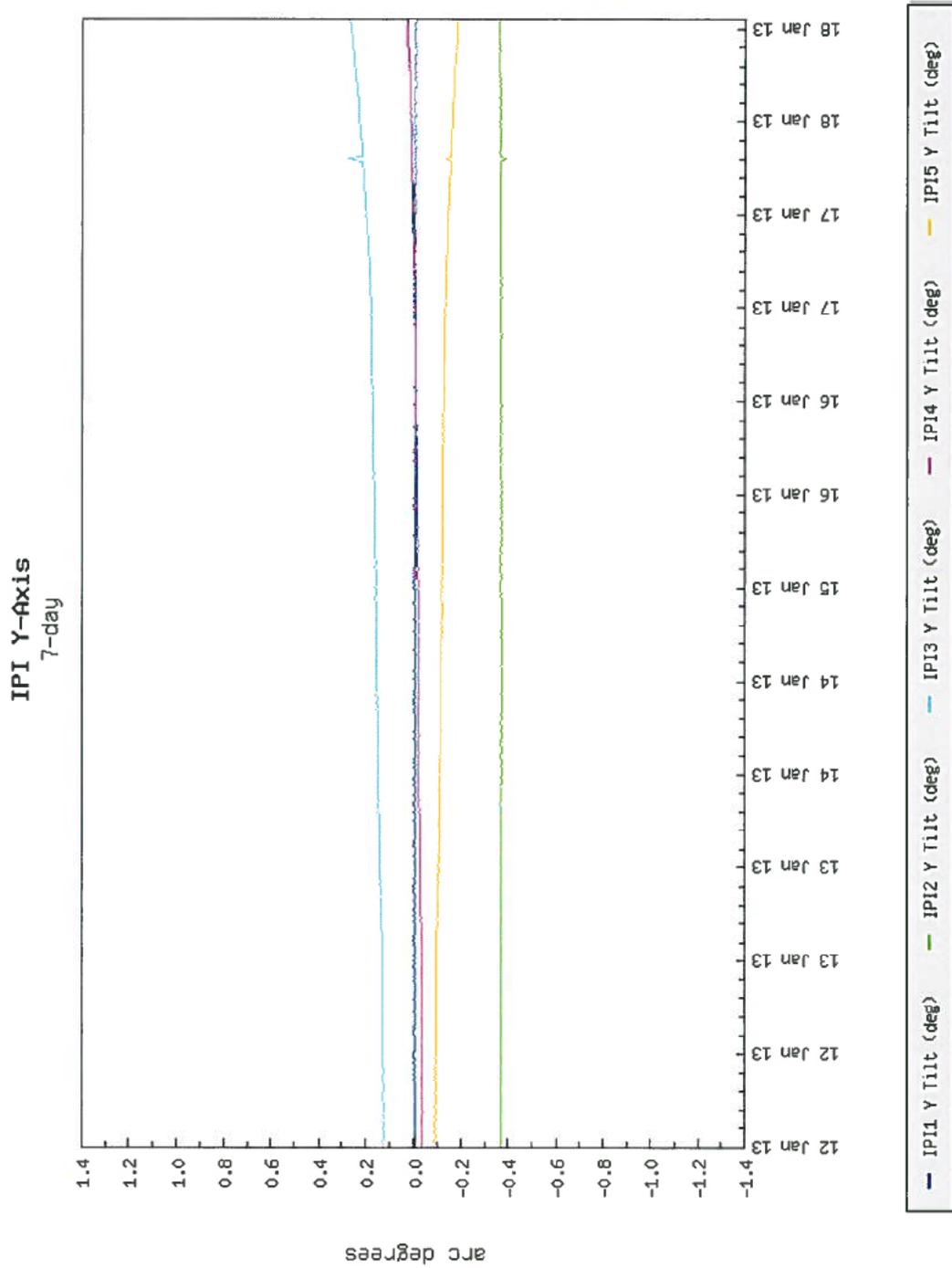


Figure 3. Inclinometer Y-Direction Temporal Trends.

RSI-2153-13-016

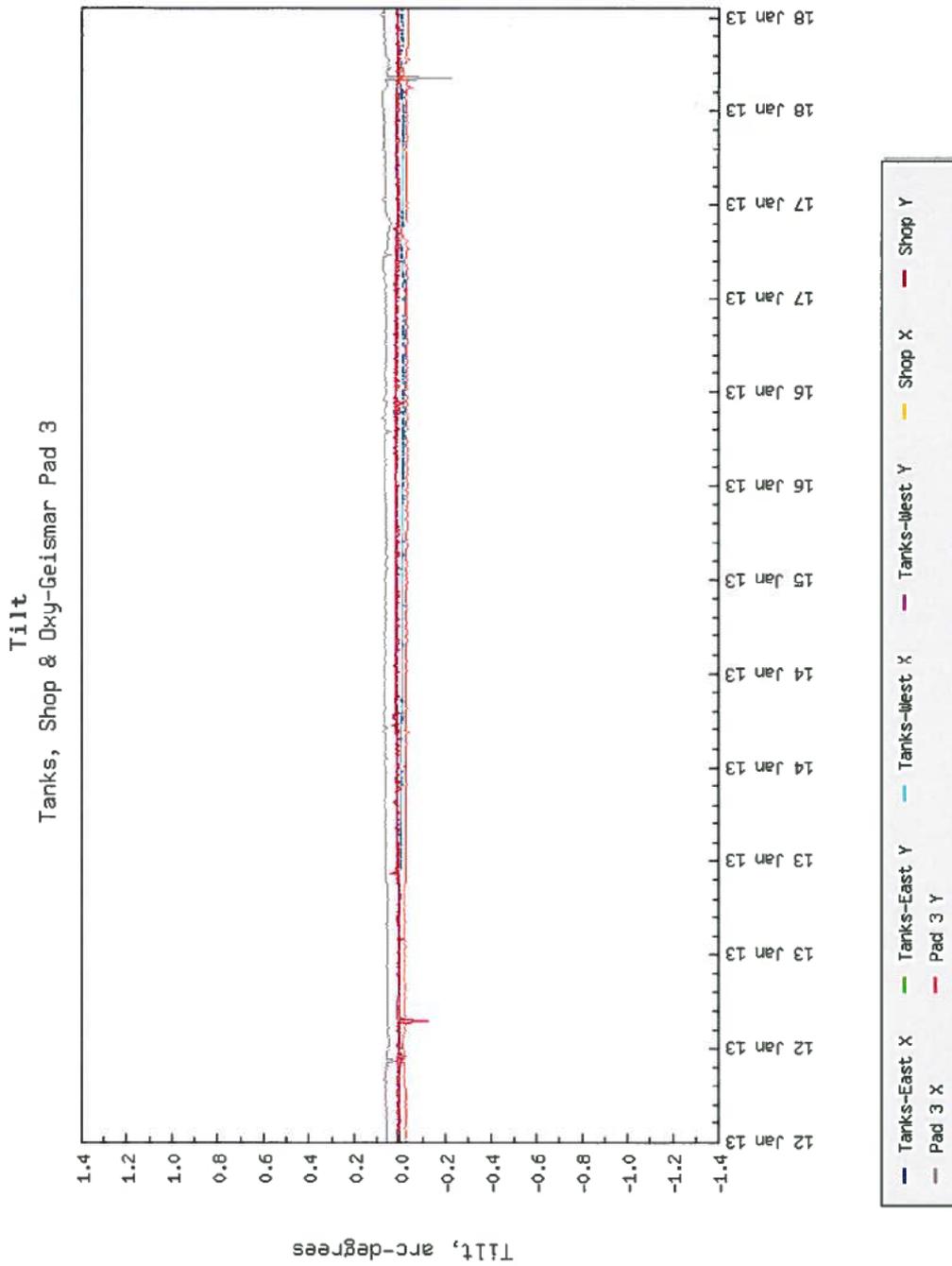


Figure 4. Tiltmeter Temporal Trends.

RSI-2153-13-017

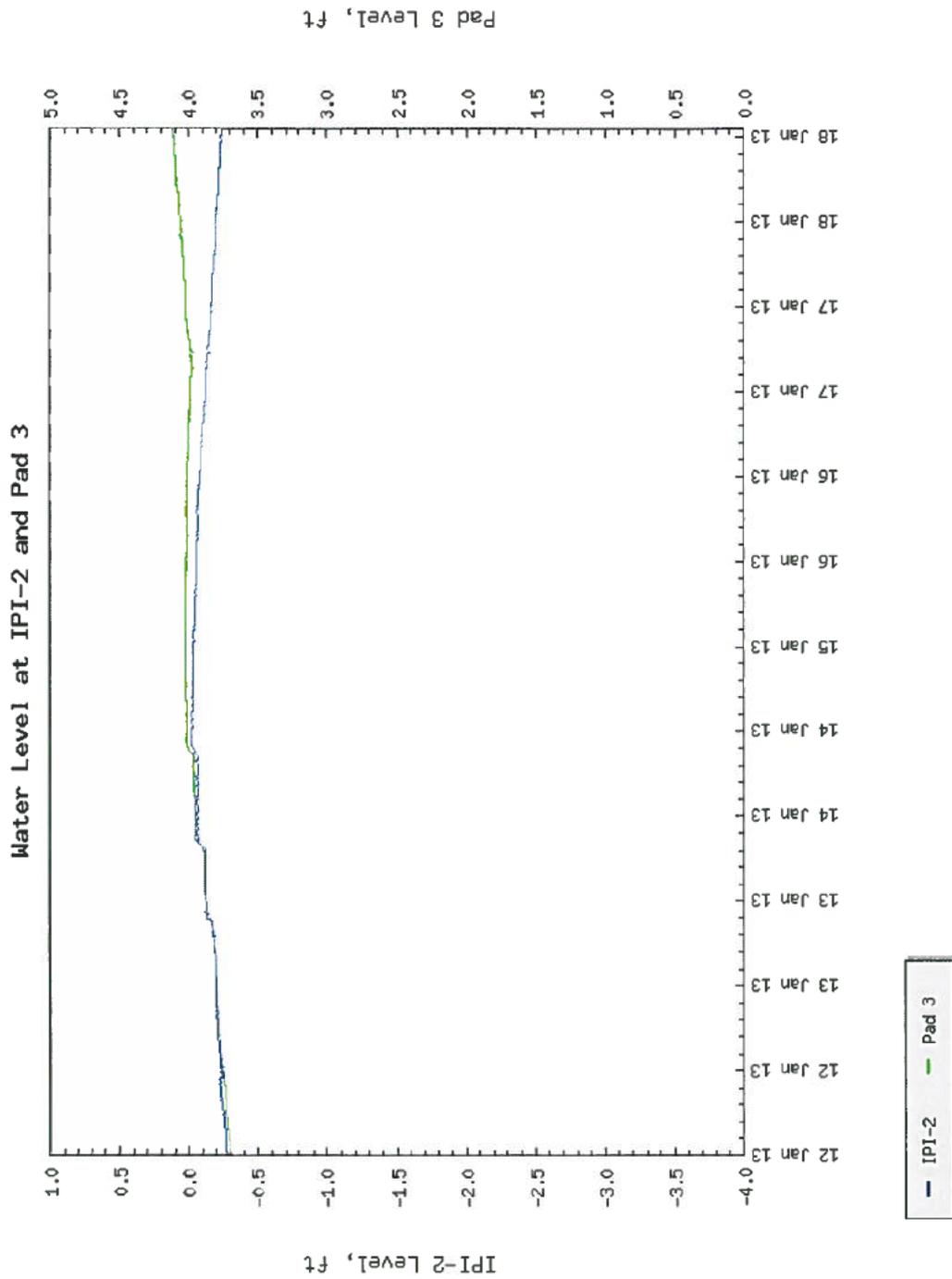


Figure 5. Water-Level Temporal Trends.

RSI-2153-13-018

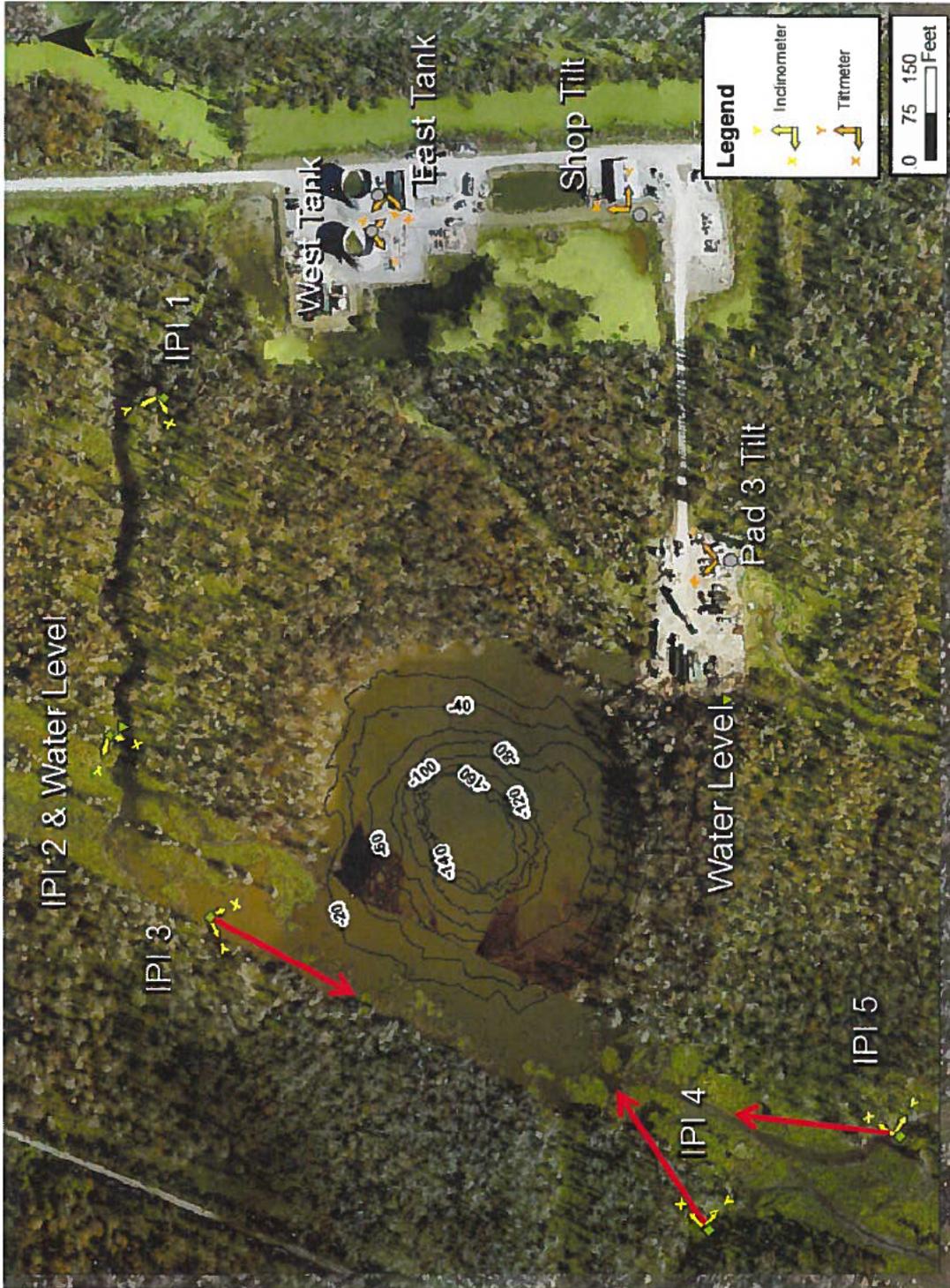
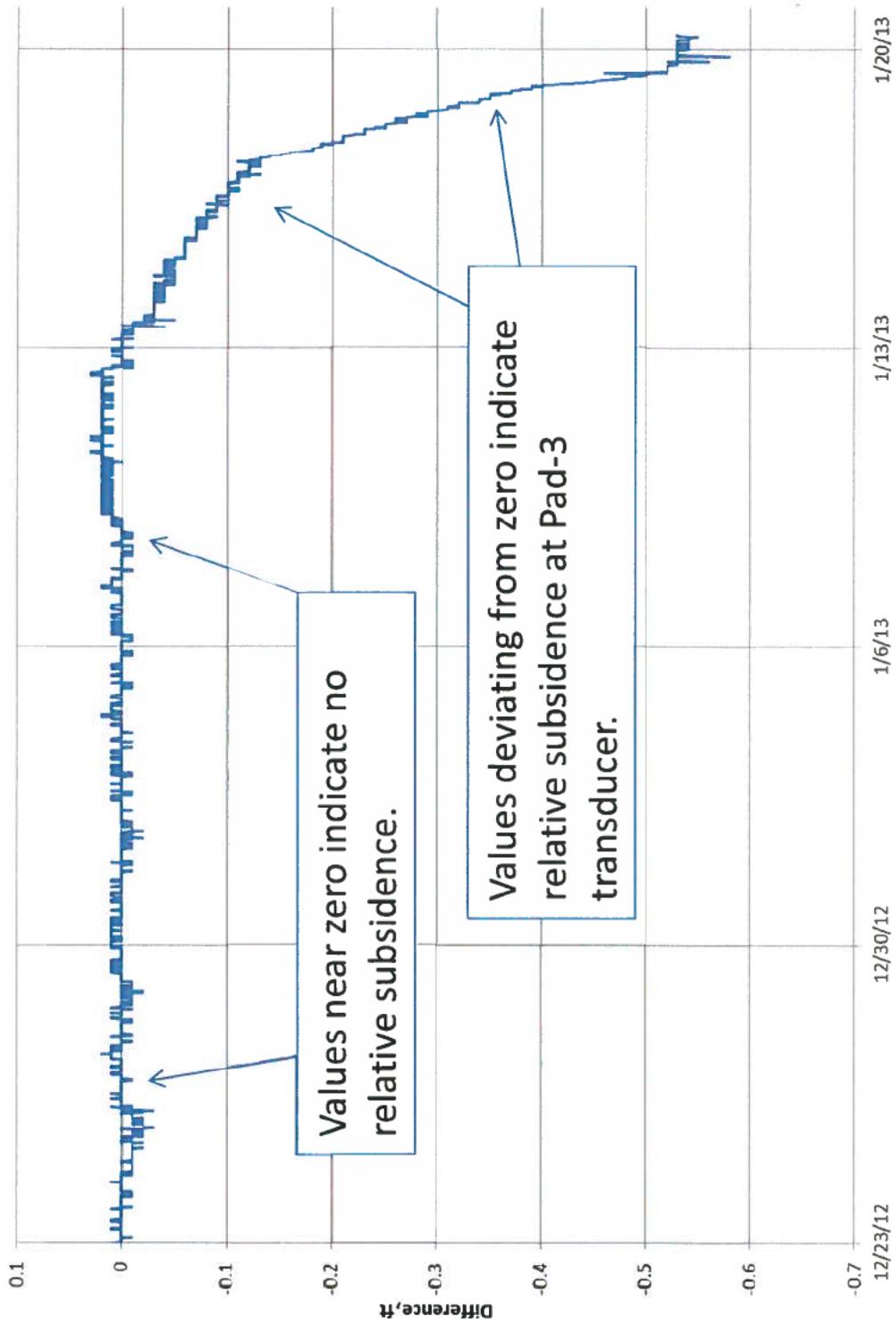


Figure 6. Recent Tilt Direction and Relative Magnitude (Red Arrows) January 13-18, 2013.

RSI-2153-13-019



**Figure 7.** Long-Term Difference Between Water Levels at Pad-3 and IPI-2 Water Level Transducers.

RSI-2153-13-020

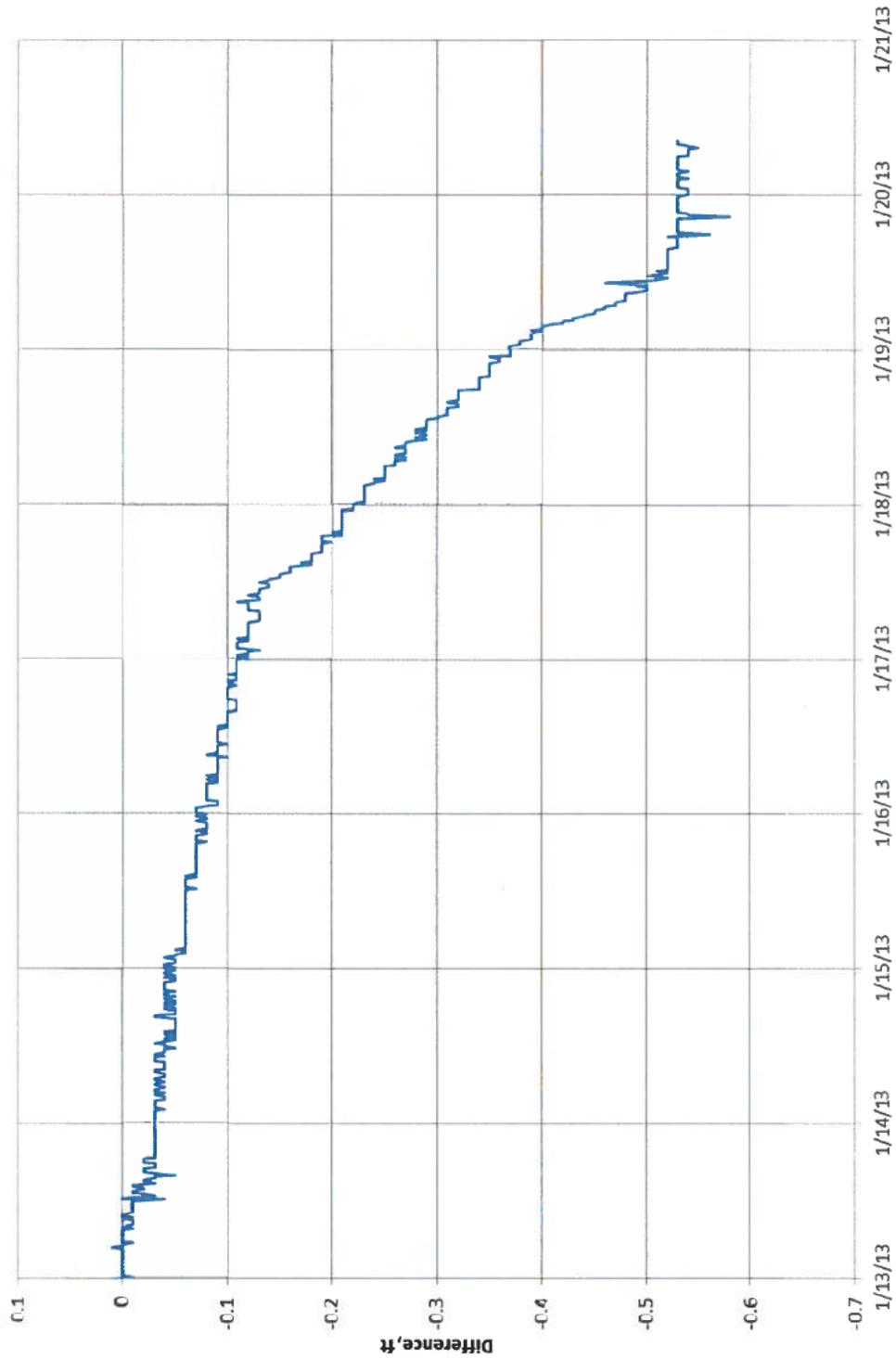


Figure 8. Recent Difference Between Water Levels at Pad-3 and IPI-2 Water-Level Transducers.

67°F Belle Rose, Louisiana

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Current Conditions - °F | °C

As of 1:53 PM on Monday 21 Jan 2013 (Local Time) from KBTR Reporting Station

Broken Clouds **67°F**  
Feels Like: 67°  
Wind Chill: 67°  
Heat Index: 67°  
Dew Point: 42°  
Humidity: 40%  
Pressure: 30.17"

Today's Forecast

3 PM P Cloudy 65°  
4 PM P Cloudy 62°  
5 PM P Cloudy 60°

**No Weather Alerts for this location**

Report Text: KBTR 211953Z AUTO 04009KT 105 M BKN050 19j06 A3017 RMK AO2 SLP214 T01940056 TSNO

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Radar · Satellite · Surface Analysis

10 Day Forecast - °F | °C

View the Detailed Extended Forecast »

mon	tue	wed	thu	fri	sat	sun	mon	tue	wed
jan 21	jan 22	jan 23	jan 24	jan 25	jan 26	jan 27	jan 28	jan 29	jan 30
66° 42°	59° 42°	65° 50°	70° 56°	65° 44°	54° 38°	63° 53°	71° 60°	71° 54°	66° 45°

Details for Monday, January 21 (Evening)

Evening: Mainly clear. Low 42F. Winds NNE at 5 to 10 mph.

UV Index: 4 (Moderate) Relative Humidity: 77% Precipitation: 0% Snow: 0% Cloud Coverage: 8%

Sunrise: 6:59 AM  
Sunset: 5:32 PM

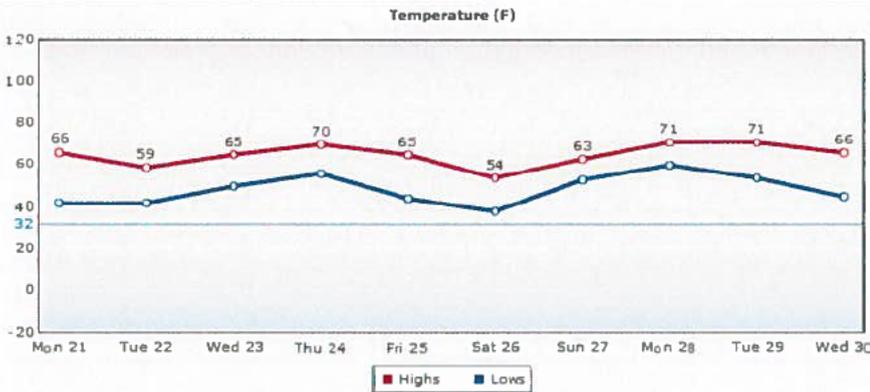
Moonrise: 1:14 PM  
Moonset: 2:27 AM

Moonphase: Waxing Gibbous

Direction: NNE (23°)  
Speed: 6Mph(9Km, 5Kts)

Daily Forecast Chart

Chart Options: Temperature



Temperature UV Index Relative Humidity Precipitation Snow Clouds Wind

Daily Forecast Hourly Forecast Past Observations Historic Averages

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