

TSX/PAZ Satellite Update
InSAR Subsidence
November 6, 2023

Lonquist comment:

The TSX satellite from the TSX/PAZ constellation (4 & 7-day revisit) passed by Sulphur on Monday November 6. We received the dataset Wednesday and verified that none of the datapoint areas around the dome and caverns near the western flank are showing deviation from their respective trends. The attached time series plots have been prepared for reference.



TSX/PAZ Satellite Update

Continuous InSAR Monitoring of
Ground Displacement
Near Western Caverns and Dome Flank

Sulphur Mines Salt Dome

Prepared for:
Westlake Chemical

Prepared by:
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Date Signed: November 11, 2023
Austin, Texas

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Dataset

Satellite Source

TerraSAR-X - PAZ Constellation

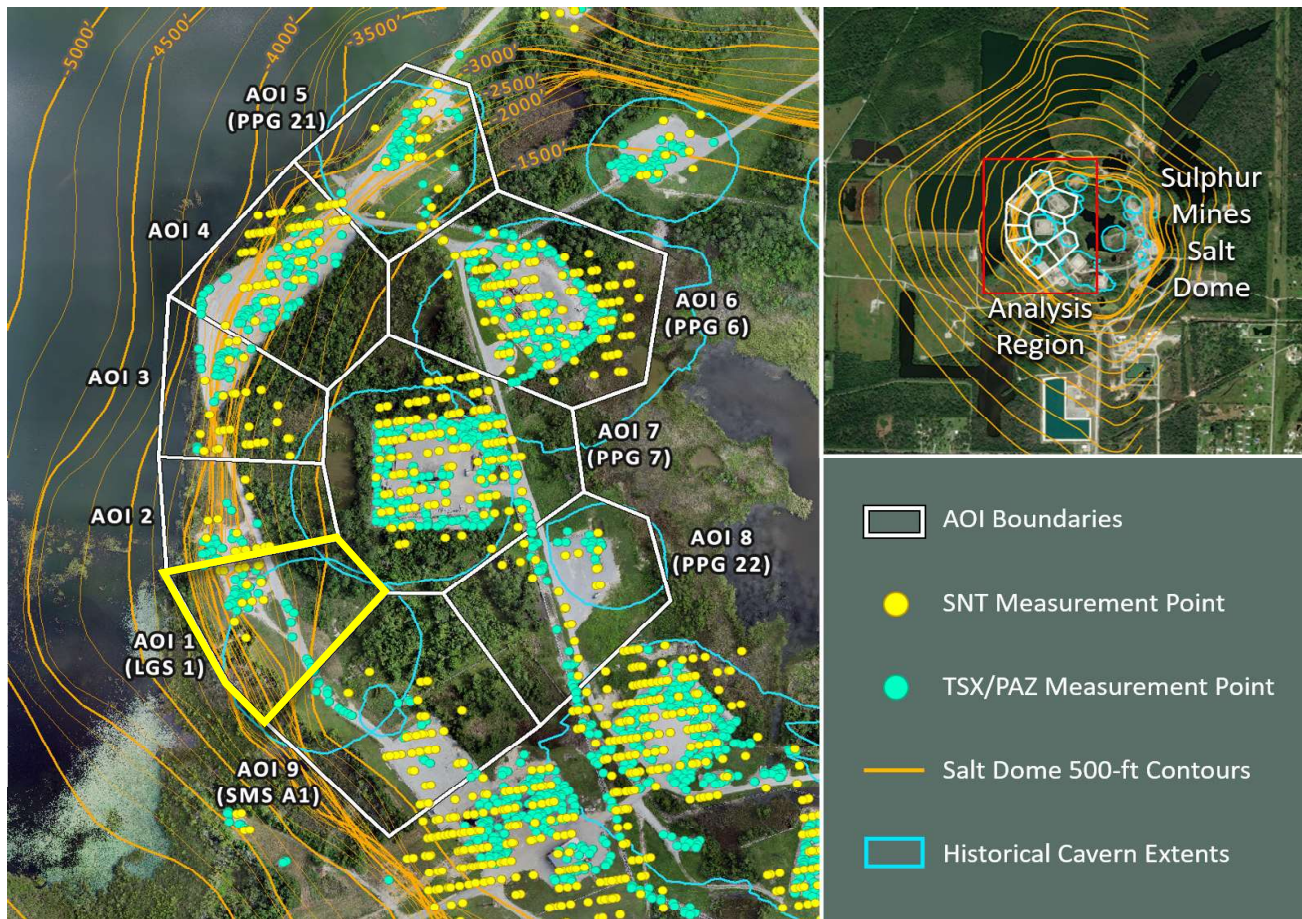
Most Recent Image Date

Monday, November 6, 2023

Analysis Report Date:

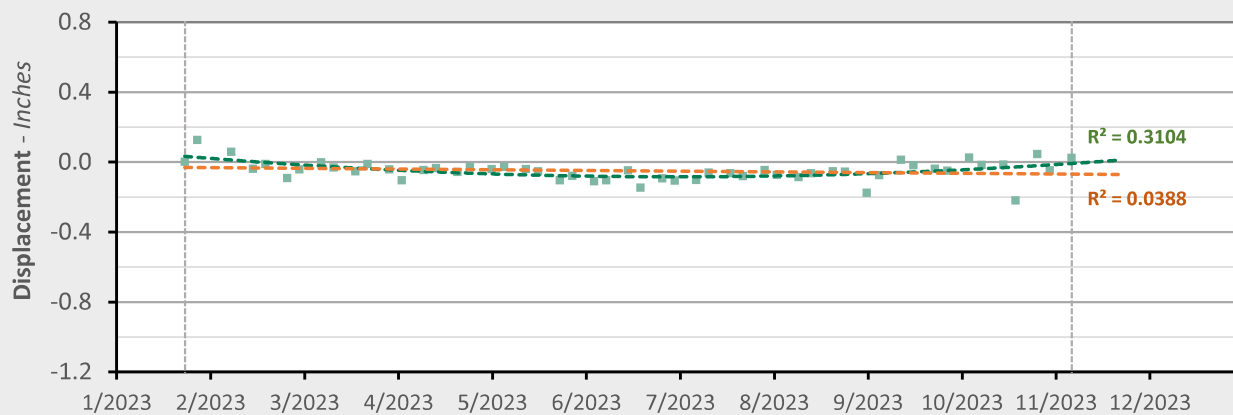
November 11, 2023

AOI 1 (LGS 1) - Location Map



AOI 1 (LGS 1) - Displacement Time Series

TSX/PAZ (11/6/2023) Point Count: 38



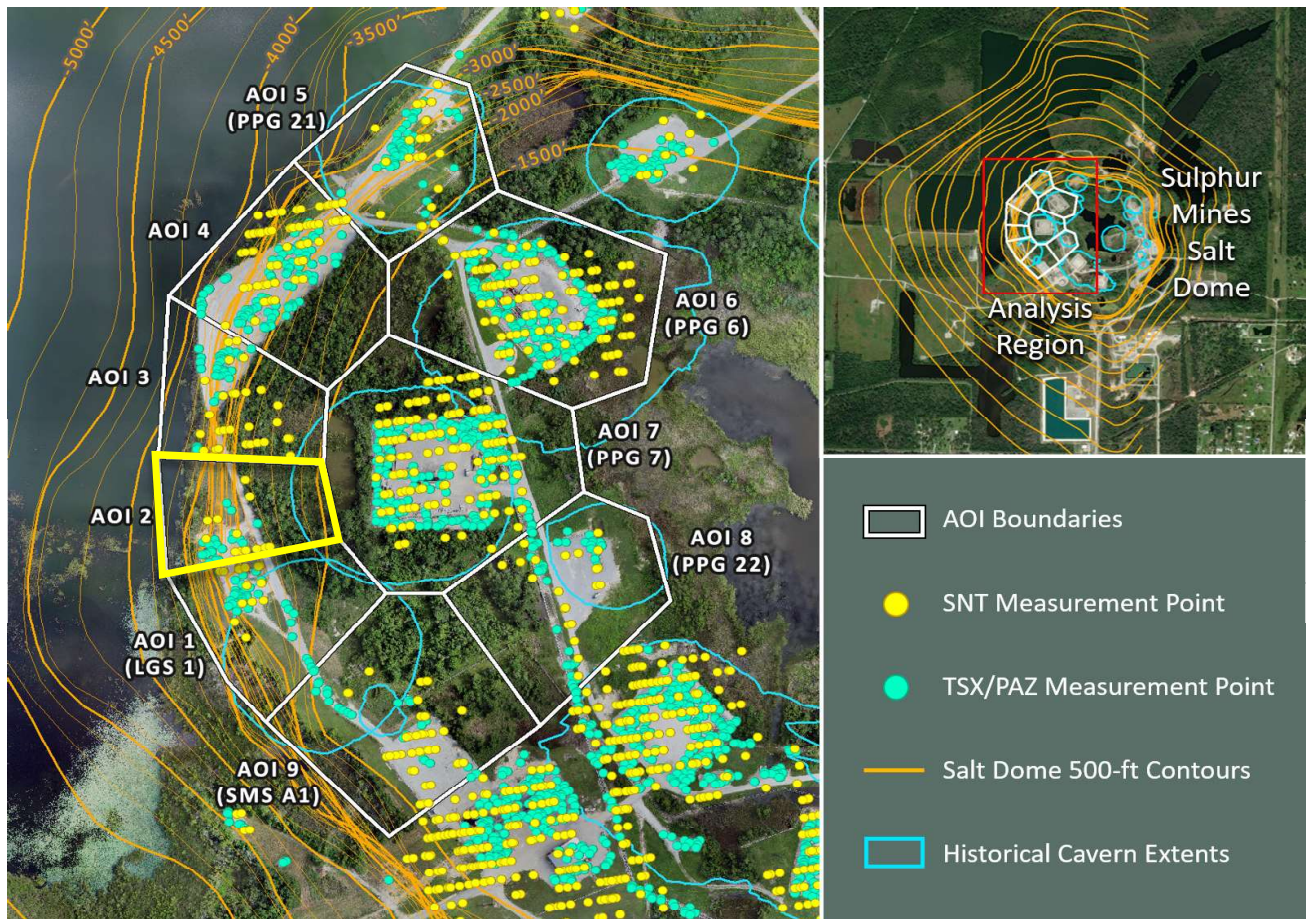
	Nonlinear Trend	Linear Trend
Velocity:	+0.43 in/yr	-0.05 in/yr
Acceleration:	+1.24 in/yr ²	0.00 in/yr ²

■ LOS Displacement Measurement

--- Nonlinear Trend Line
(Quadratic Regression)

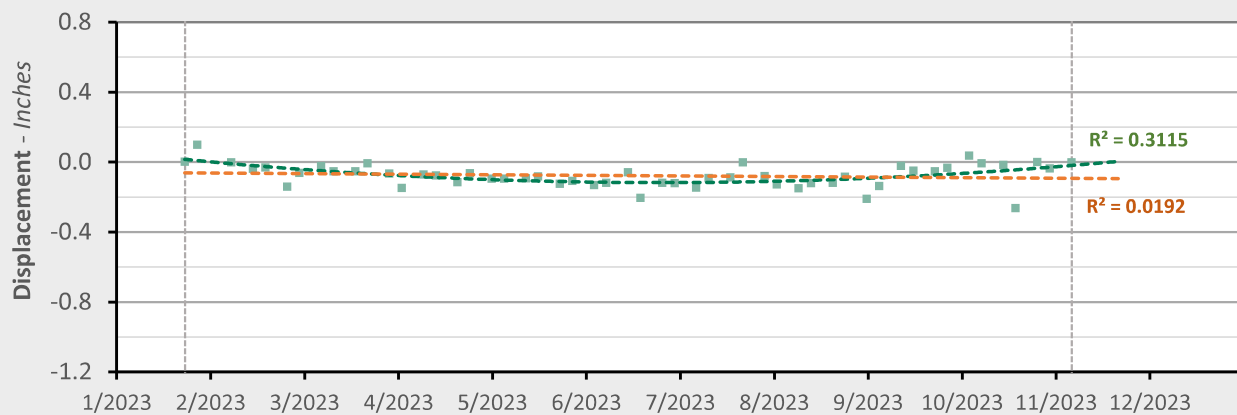
--- Linear Trend Line
(Linear Regression)

AOI 2 - Location Map



AOI 2 - Displacement Time Series

TSX/PAZ (11/6/2023) Point Count: 23



Nonlinear Trend

Linear Trend

Velocity: +0.54 in/yr

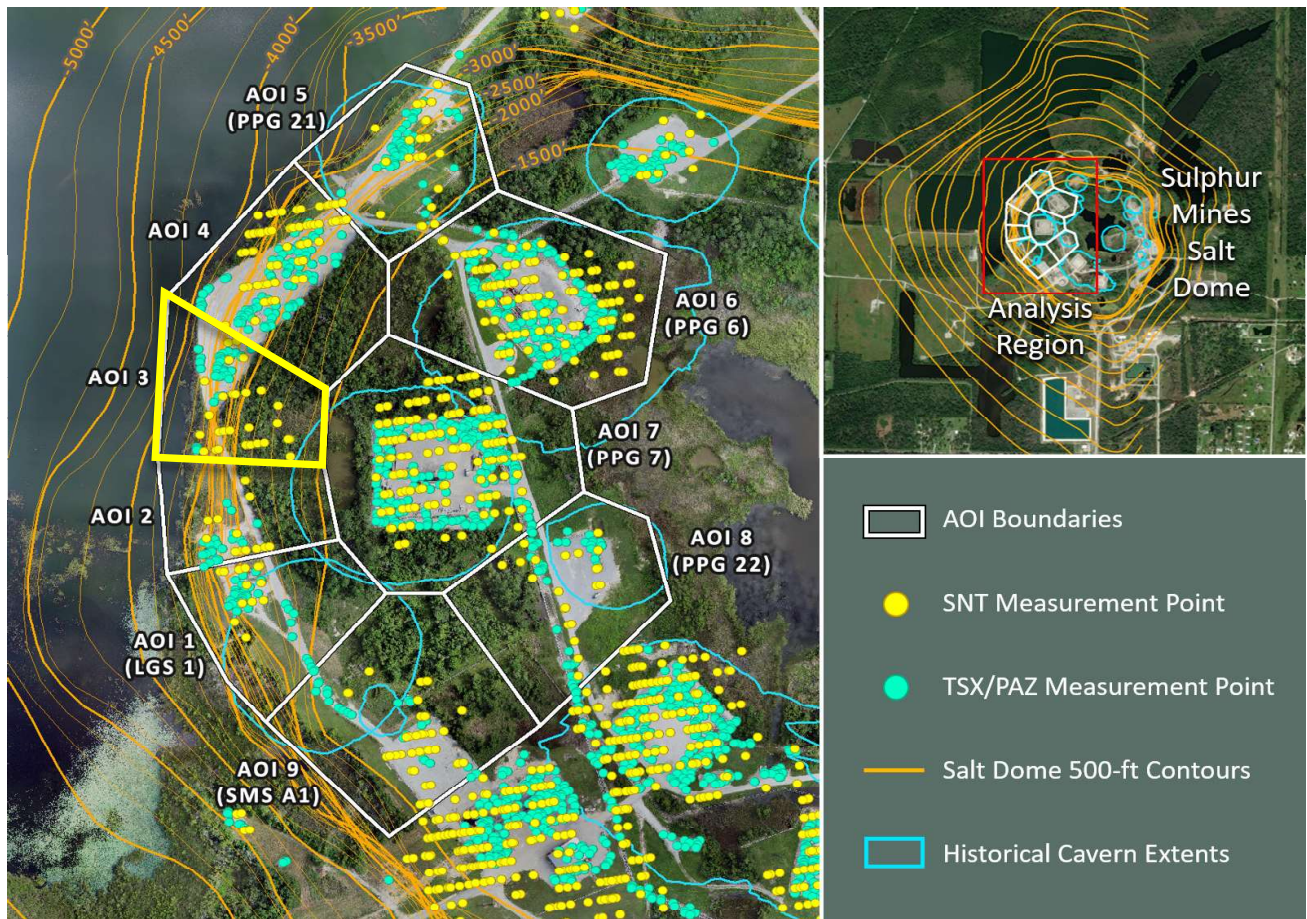
-0.04 in/yr

Acceleration: +1.49 in/yr²0.00 in/yr²

■ LOS Displacement Measurement

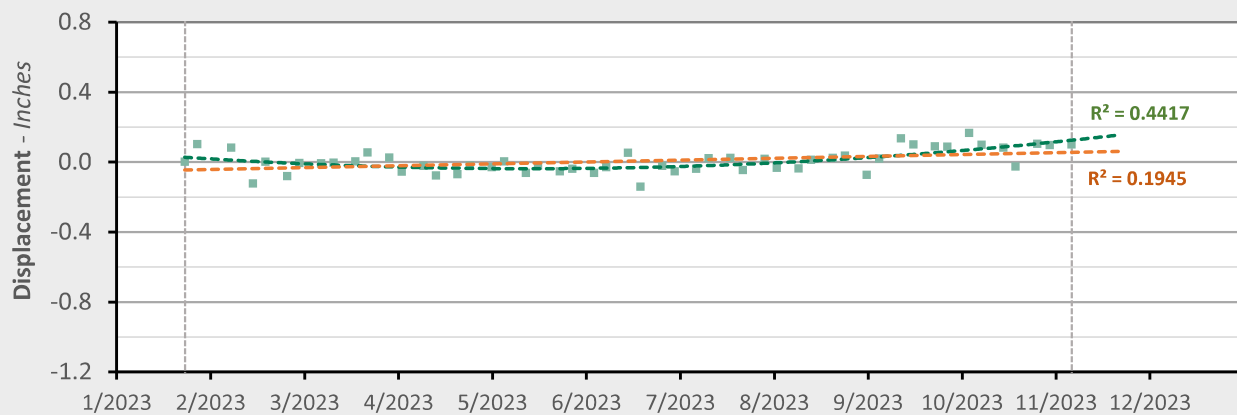
--- Nonlinear Trend Line
(Quadratic Regression)--- Linear Trend Line
(Linear Regression)

AOI 3 - Location Map



AOI 3 - Displacement Time Series

TSX/PAZ (11/6/2023) Point Count: 39



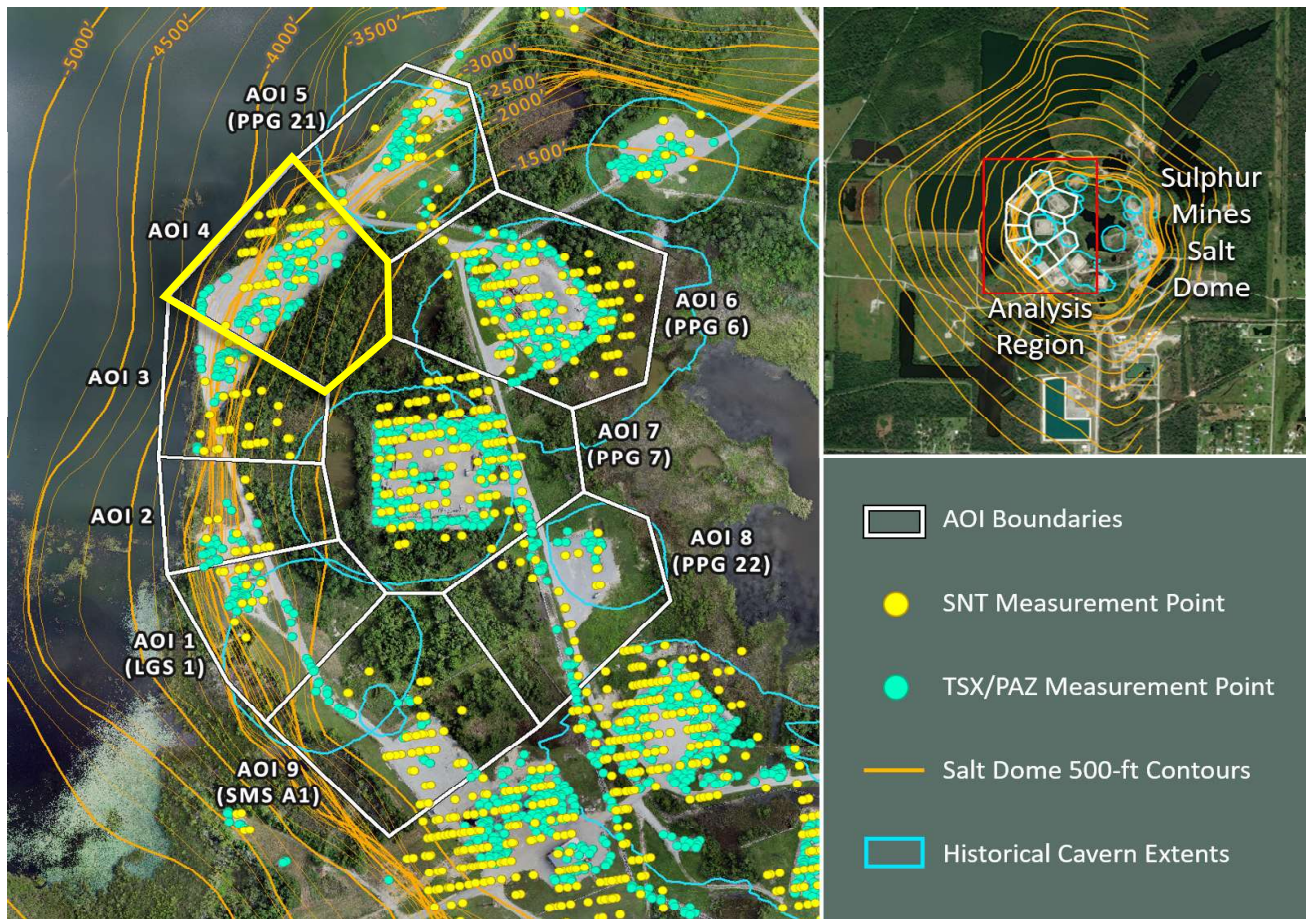
	Nonlinear Trend	Linear Trend
Velocity:	+0.68 in/yr	+0.13 in/yr
Acceleration:	+1.42 in/yr ²	0.00 in/yr ²

■ LOS Displacement Measurement

--- Nonlinear Trend Line
(Quadratic Regression)

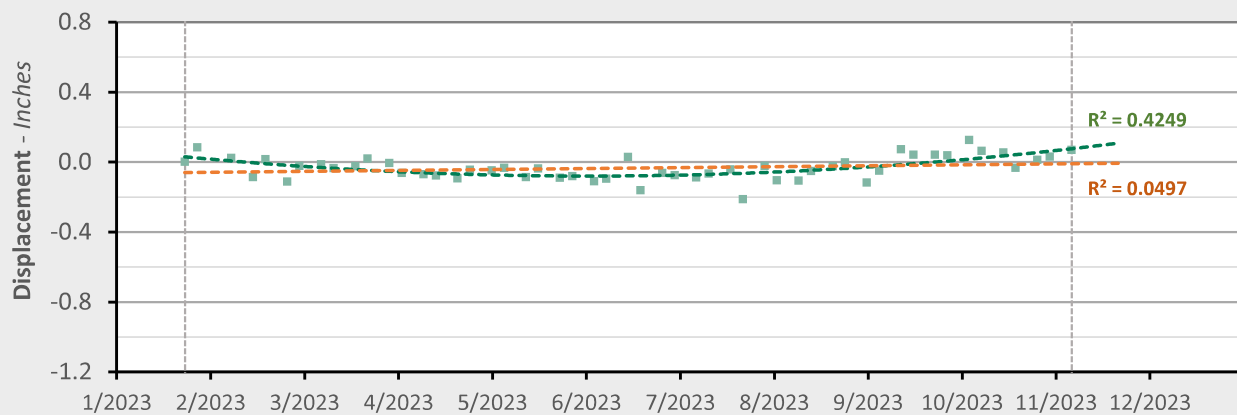
--- Linear Trend Line
(Linear Regression)

AOI 4 - Location Map



AOI 4 - Displacement Time Series

TSX/PAZ (11/6/2023) Point Count: **103**



Nonlinear Trend

Linear Trend

Velocity: +0.73 in/yr

+0.06 in/yr

Acceleration: +1.73 in/yr²

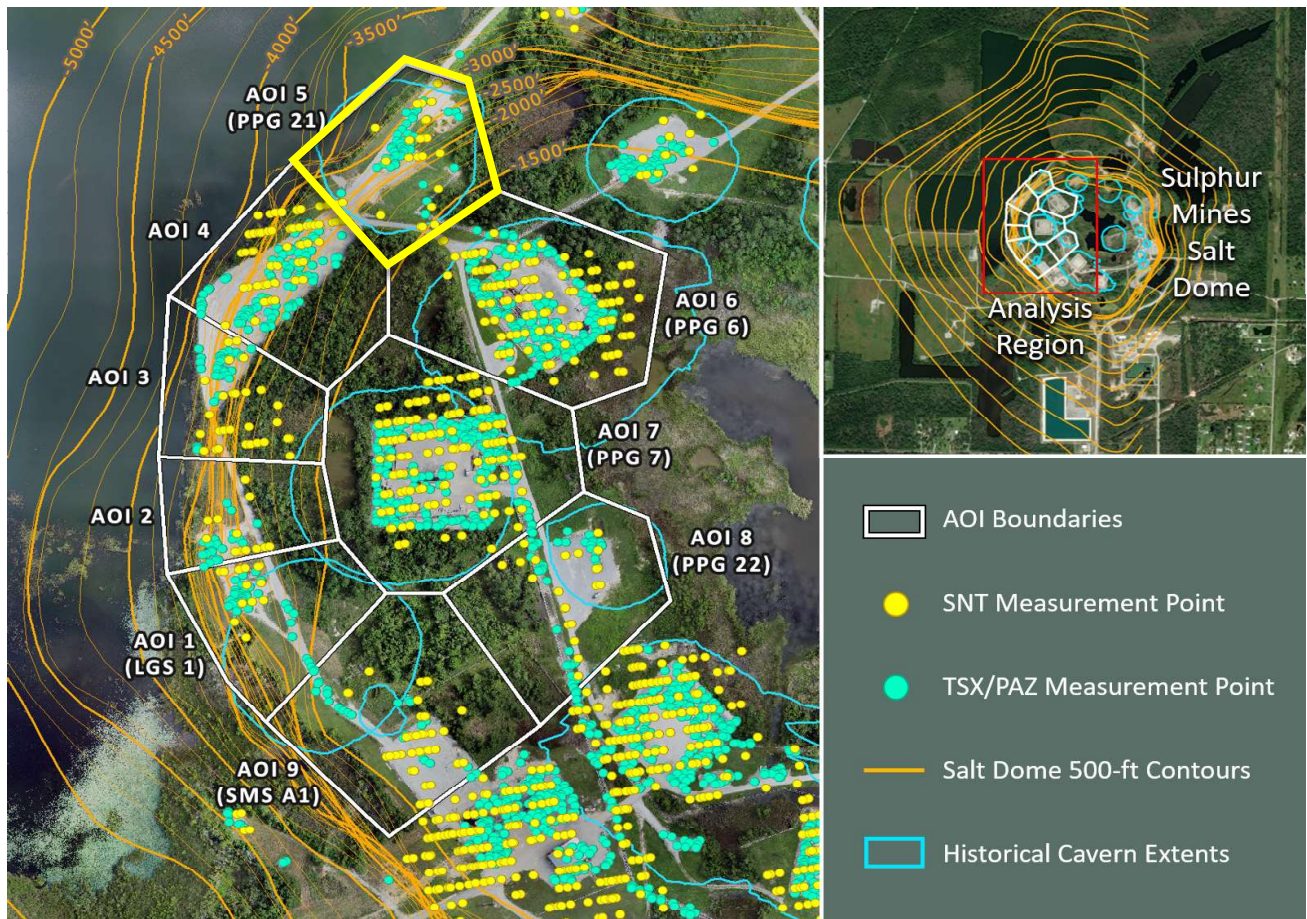
0.00 in/yr²

■ LOS Displacement Measurement

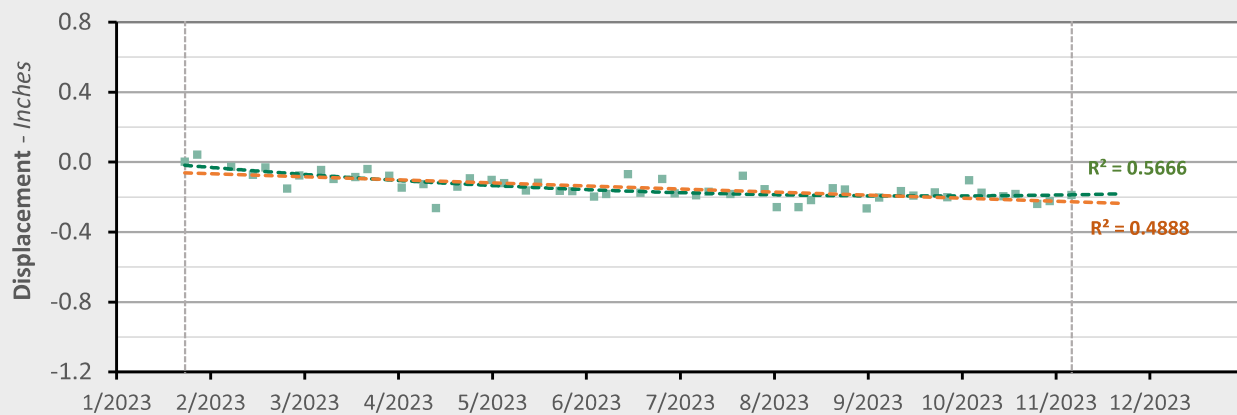
--- Nonlinear Trend Line
(Quadratic Regression)

--- Linear Trend Line
(Linear Regression)

AOI 5 (PPG 21) - Location Map



AOI 5 (PPG 21) - Displacement Time Series TSX/PAZ (11/6/2023) Point Count: 46

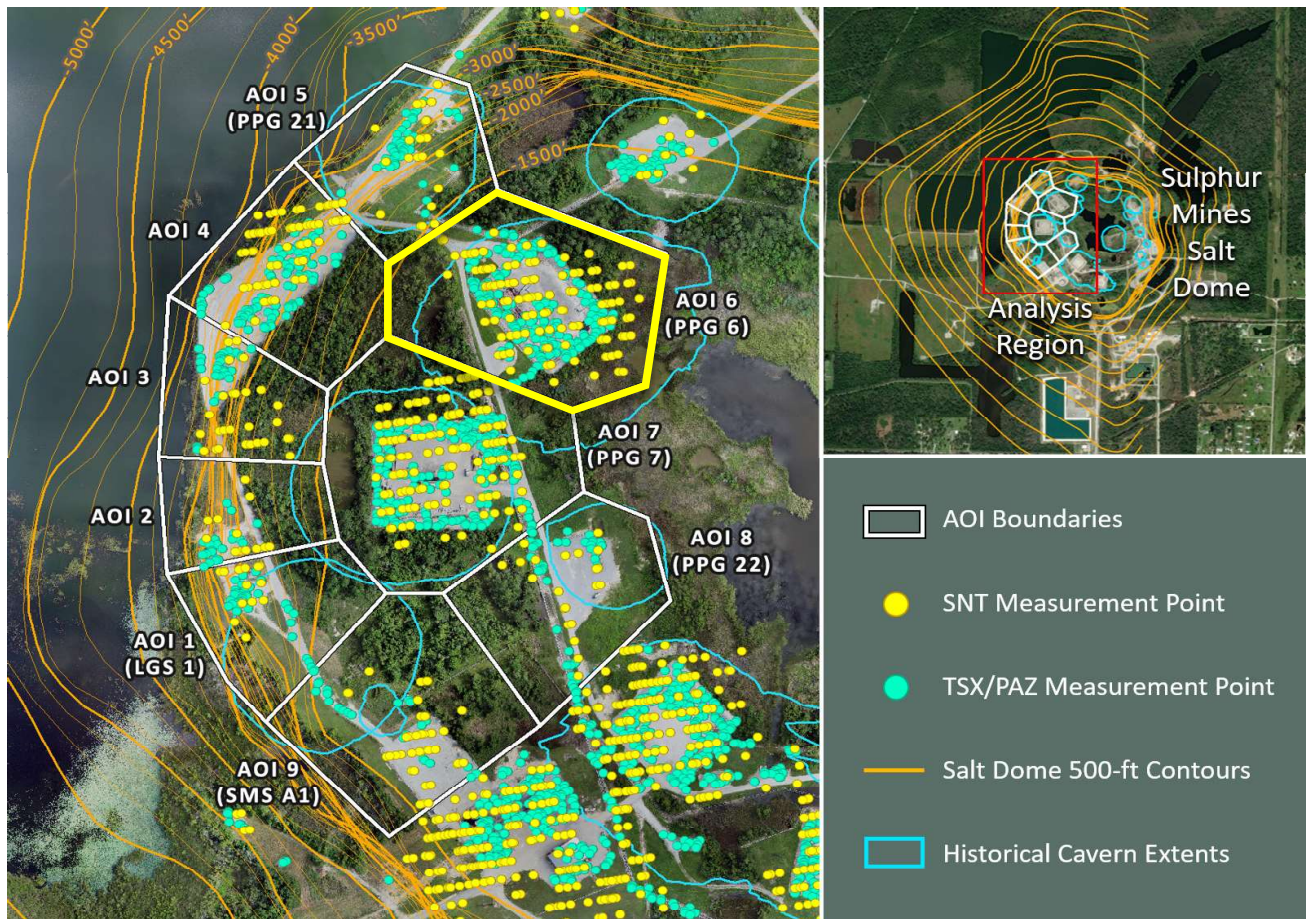


	Nonlinear Trend	Linear Trend
Velocity:	+0.11 in/yr	-0.21 in/yr
Acceleration:	+0.82 in/yr ²	0.00 in/yr ²

■ LOS Displacement Measurement

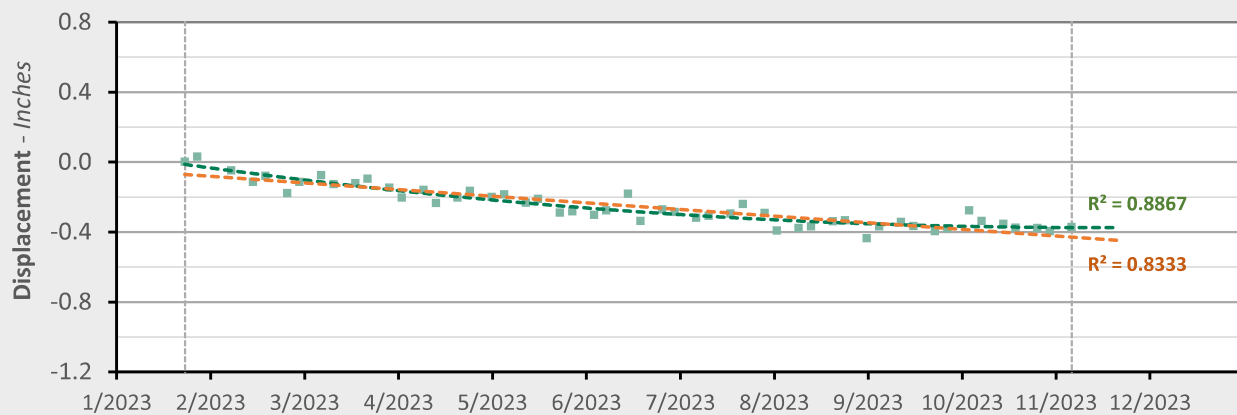
--- Nonlinear Trend Line
(Quadratic Regression)--- Linear Trend Line
(Linear Regression)

AOI 6 (PPG 6) - Location Map



AOI 6 (PPG 6) - Displacement Time Series

TSX/PAZ (11/6/2023) Point Count: 212



Nonlinear Trend

Linear Trend

Velocity: -0.02 in/yr

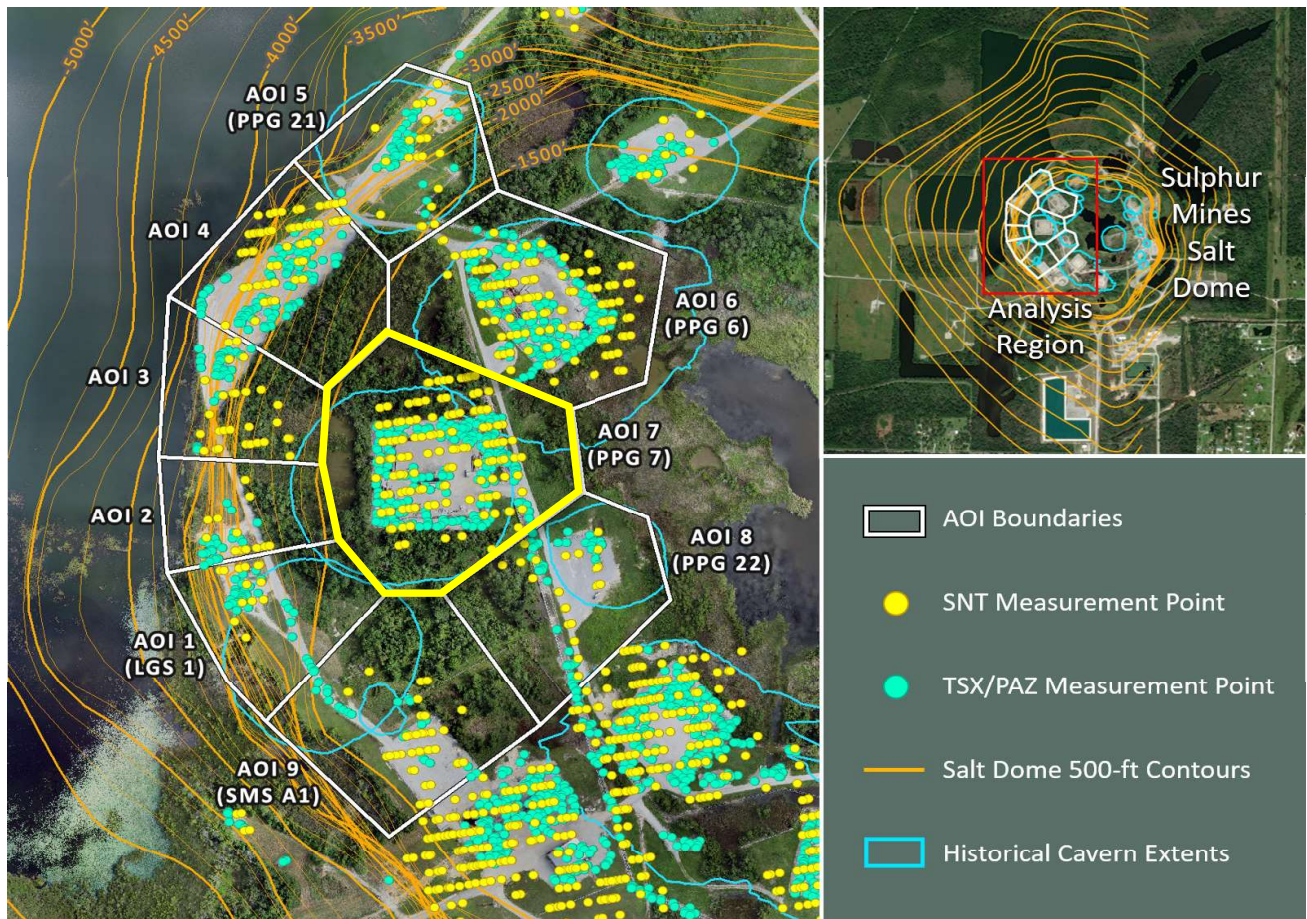
-0.46 in/yr

Acceleration: +1.13 in/yr²0.00 in/yr²

■ LOS Displacement Measurement

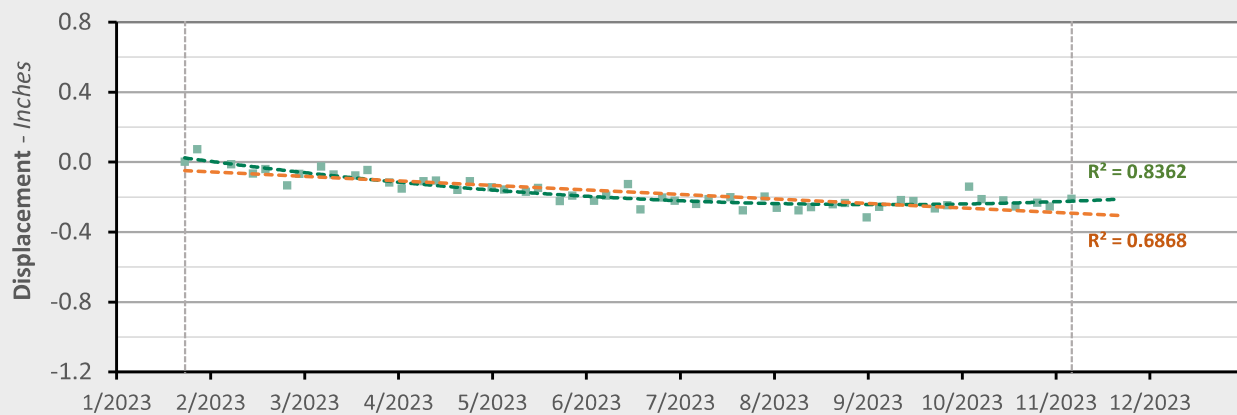
--- Nonlinear Trend Line
(Quadratic Regression)--- Linear Trend Line
(Linear Regression)

AOI 7 (PPG 7) - Location Map



AOI 7 (PPG 7) - Displacement Time Series

TSX/PAZ (11/6/2023) Point Count: 214

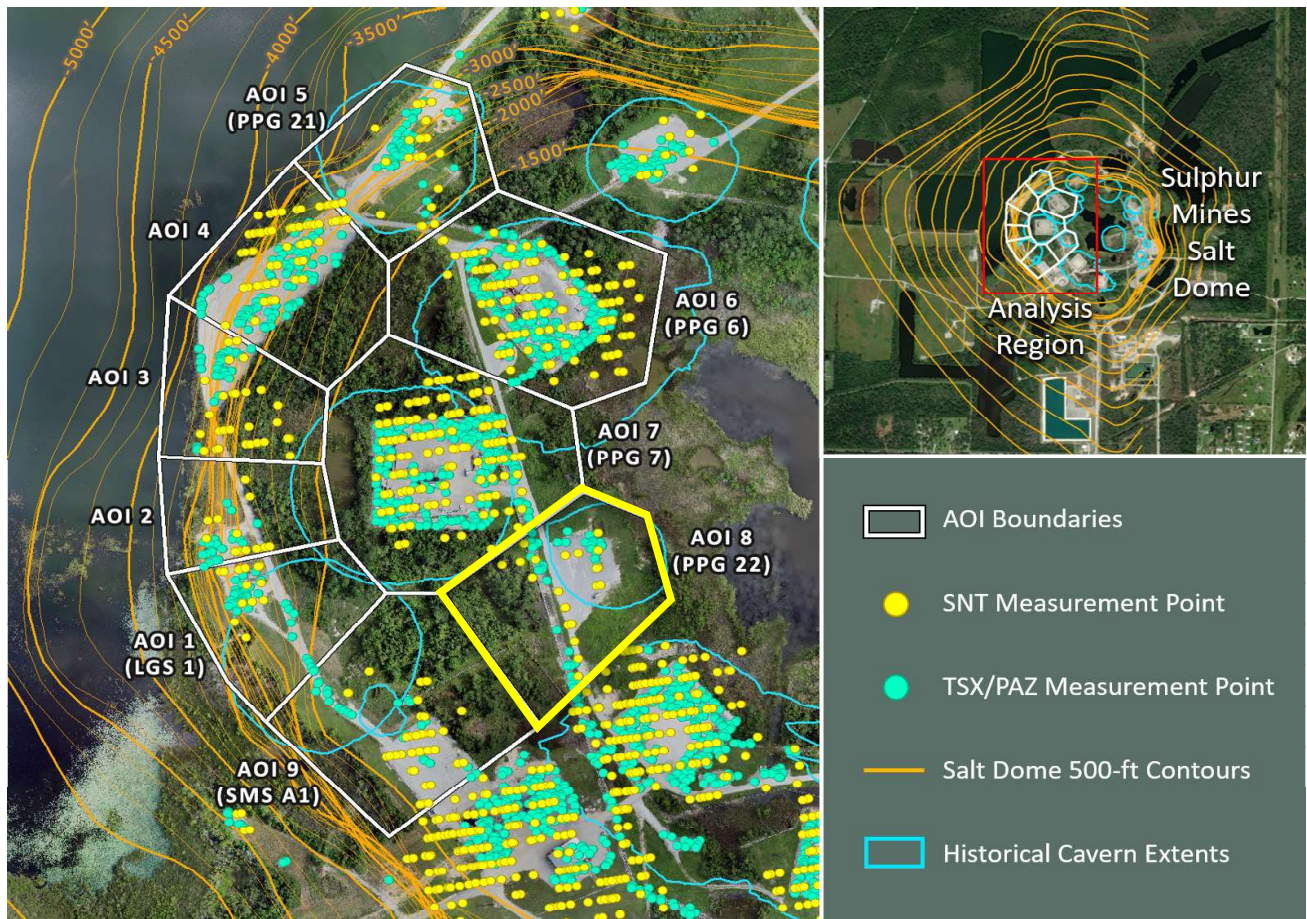


	Nonlinear Trend	Linear Trend
Velocity:	+0.24 in/yr	-0.31 in/yr
Acceleration:	+1.41 in/yr ²	0.00 in/yr ²

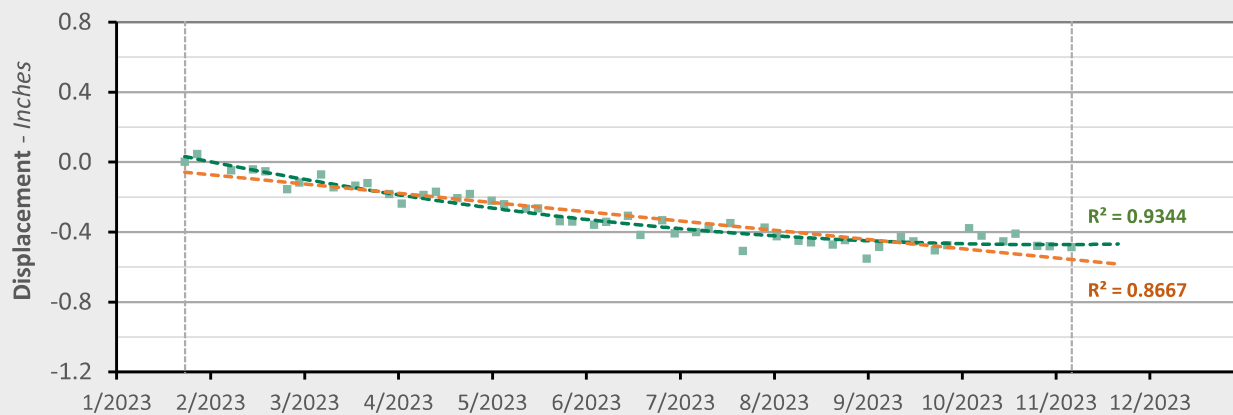
■ LOS Displacement Measurement

--- Nonlinear Trend Line
(Quadratic Regression)--- Linear Trend Line
(Linear Regression)

AOI 8 (PPG 22) - Location Map



AOI 8 (PPG 22) - Displacement Time Series TSX/PAZ (11/6/2023) Point Count: 40



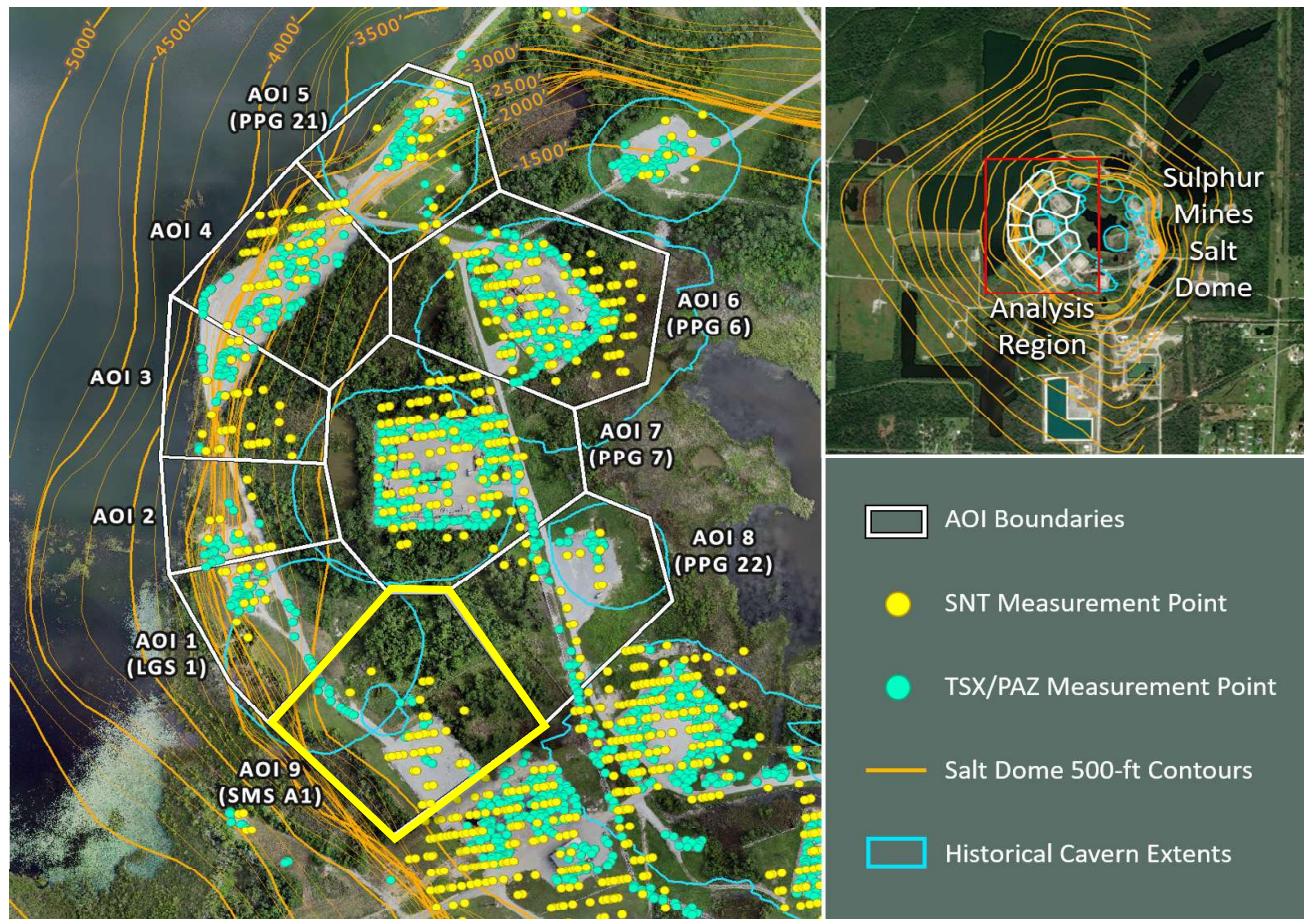
	Nonlinear Trend	Linear Trend
Velocity:	+0.04 in/yr	-0.64 in/yr
Acceleration:	+1.73 in/yr ²	0.00 in/yr ²

■ LOS Displacement Measurement

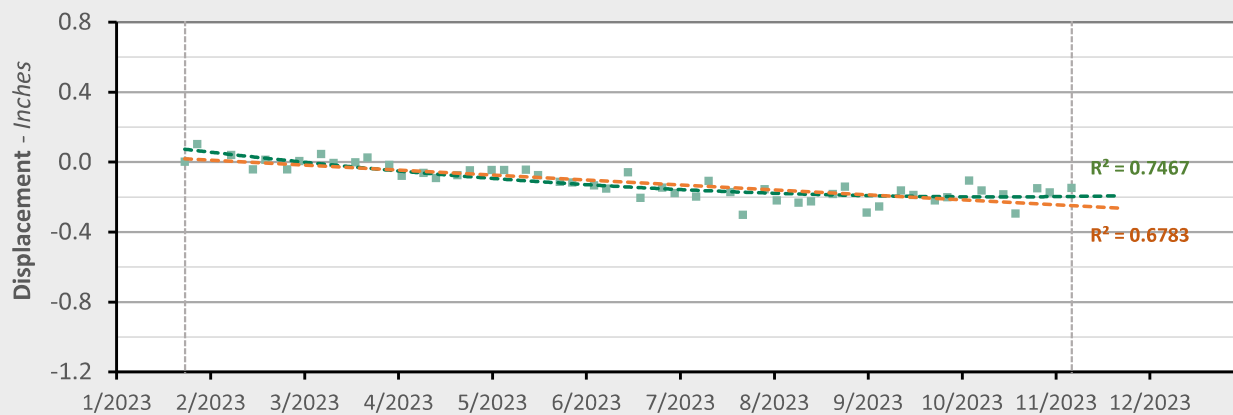
--- Nonlinear Trend Line
(Quadratic Regression)

--- Linear Trend Line
(Linear Regression)

AOI 9 (PPG A1) - Location Map



AOI 9 (SMS A1) - Displacement Time Series TSX/PAZ (11/6/2023) Point Count: 26



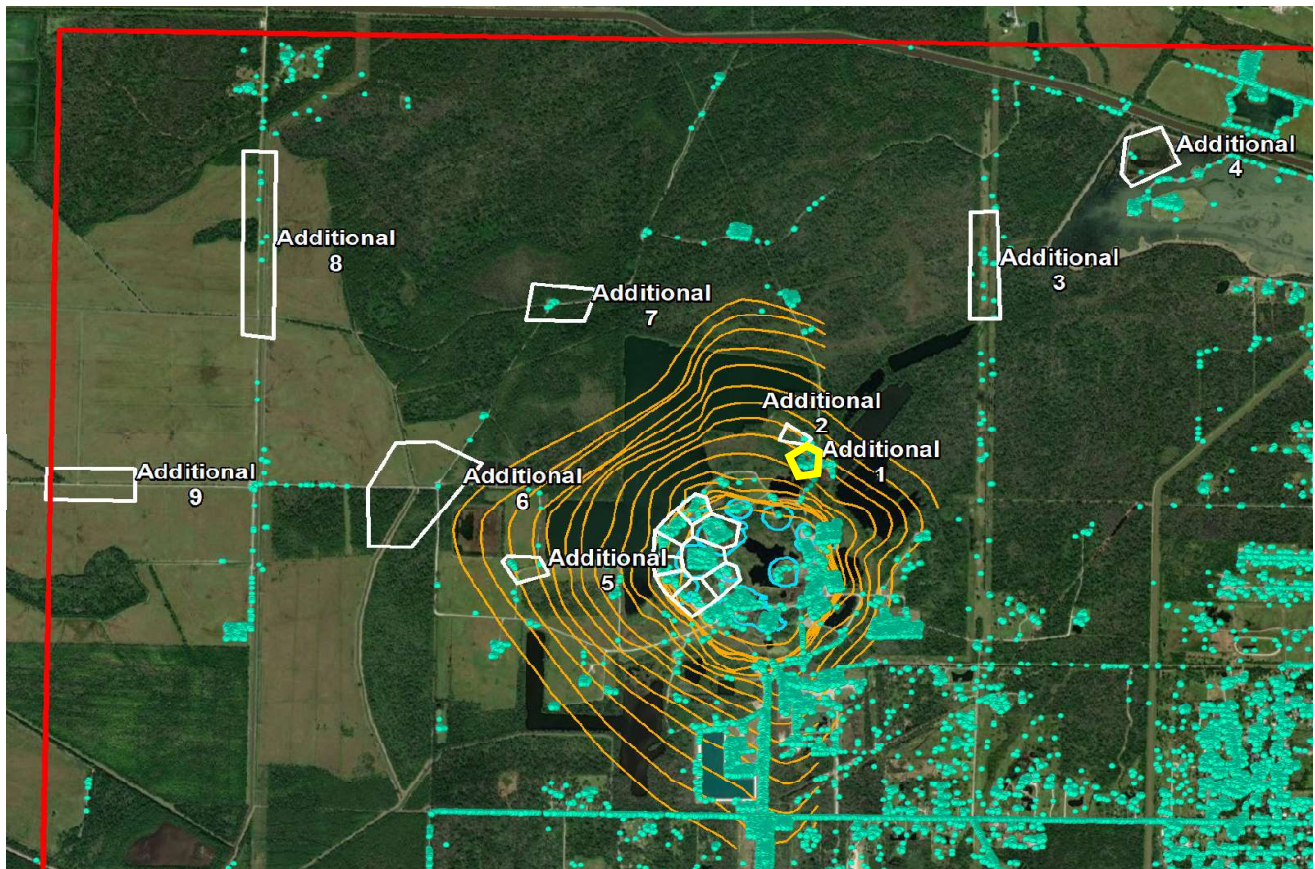
	Nonlinear Trend	Linear Trend
Velocity:	+0.07 in/yr	-0.34 in/yr
Acceleration:	+1.06 in/yr ²	0.00 in/yr ²

■ LOS Displacement Measurement

--- Nonlinear Trend Line
(Quadratic Regression)

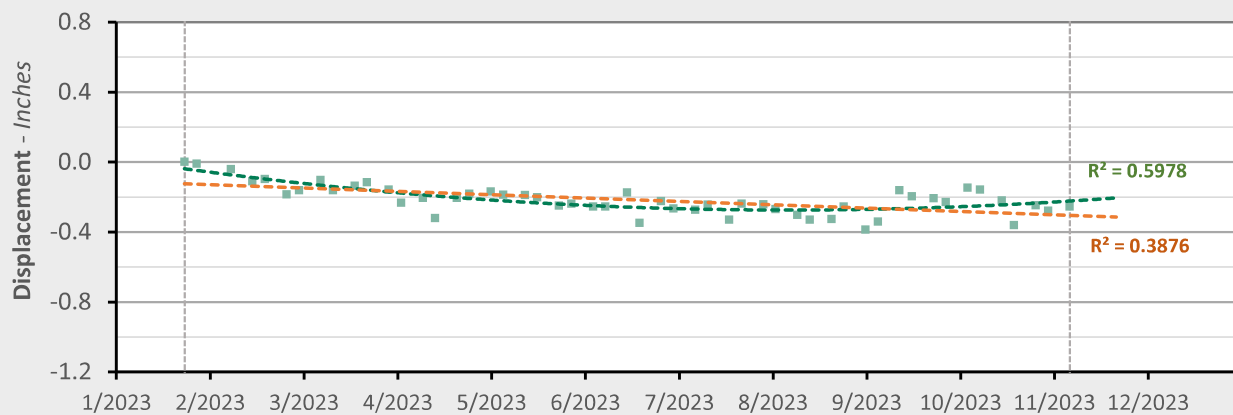
--- Linear Trend Line
(Linear Regression)

Additional 1 - Location Map



Additional 1 - Displacement Time Series

TSX/PAZ (11/6/2023) Point Count: 63

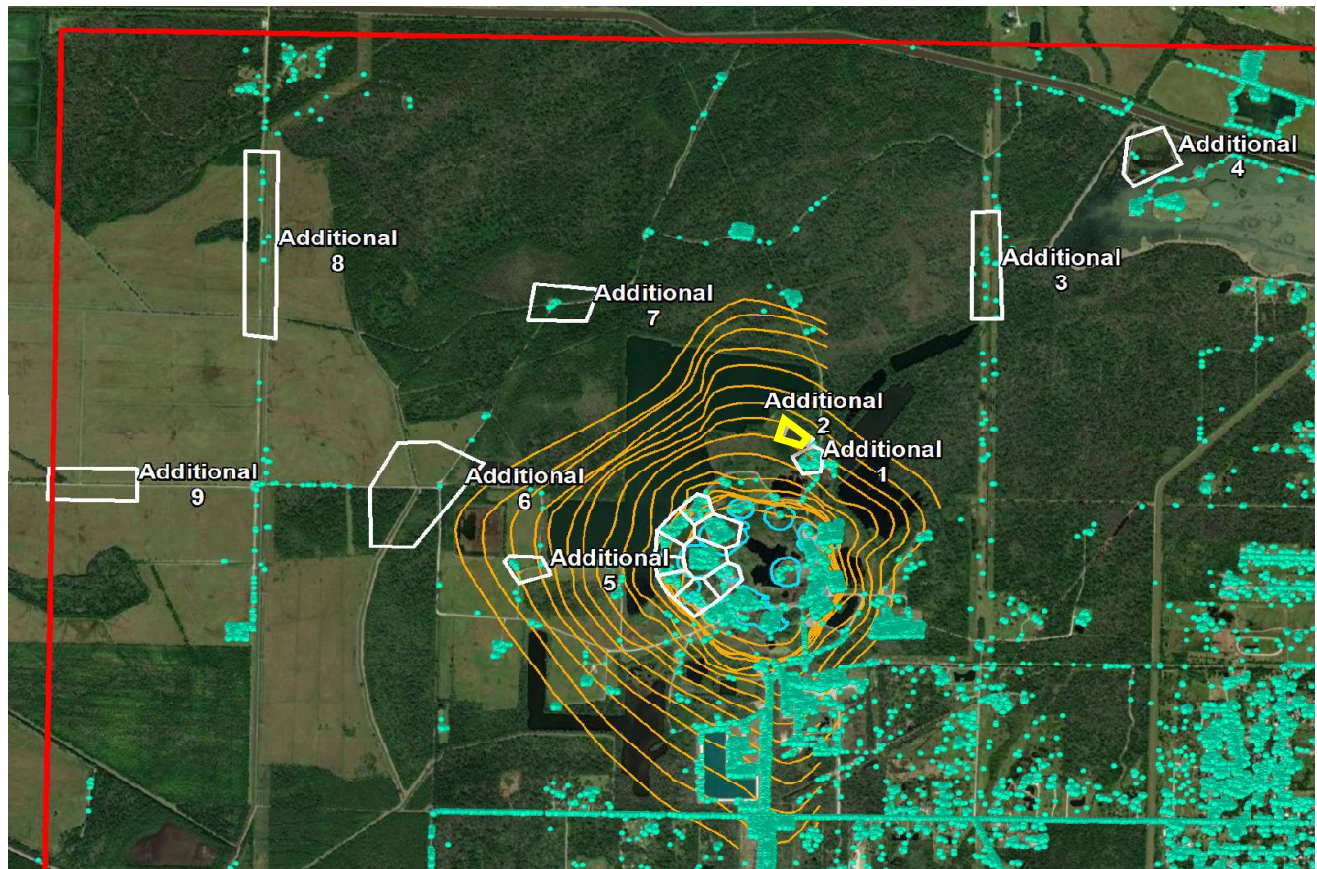


	Nonlinear Trend	Linear Trend
Velocity:	+0.41 in/yr	-0.23 in/yr
Acceleration:	+1.65 in/yr ²	0.00 in/yr ²

■ LOS Displacement Measurement

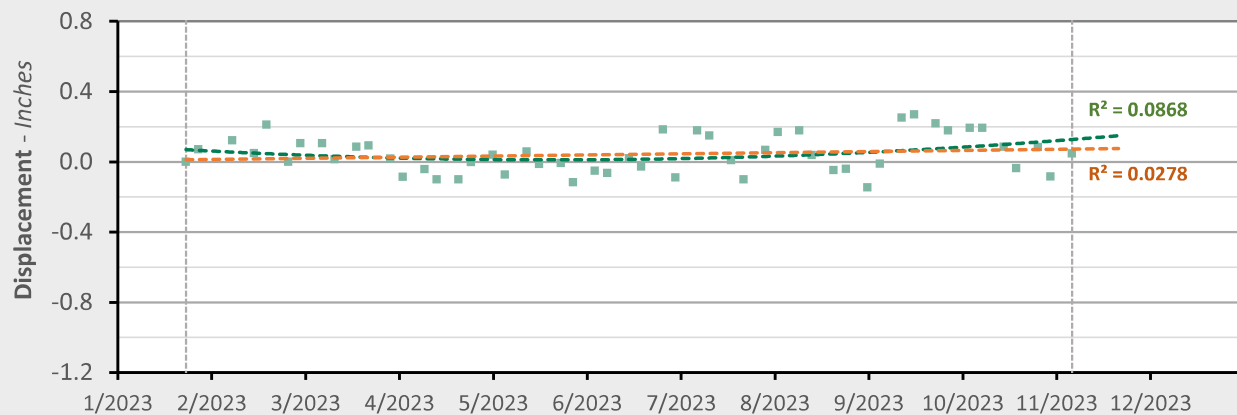
--- Nonlinear Trend Line
(Quadratic Regression)--- Linear Trend Line
(Linear Regression)

Additional 2 - Location Map



Additional 2 - Displacement Time Series

TSX/PAZ (11/6/2023) Point Count: 2

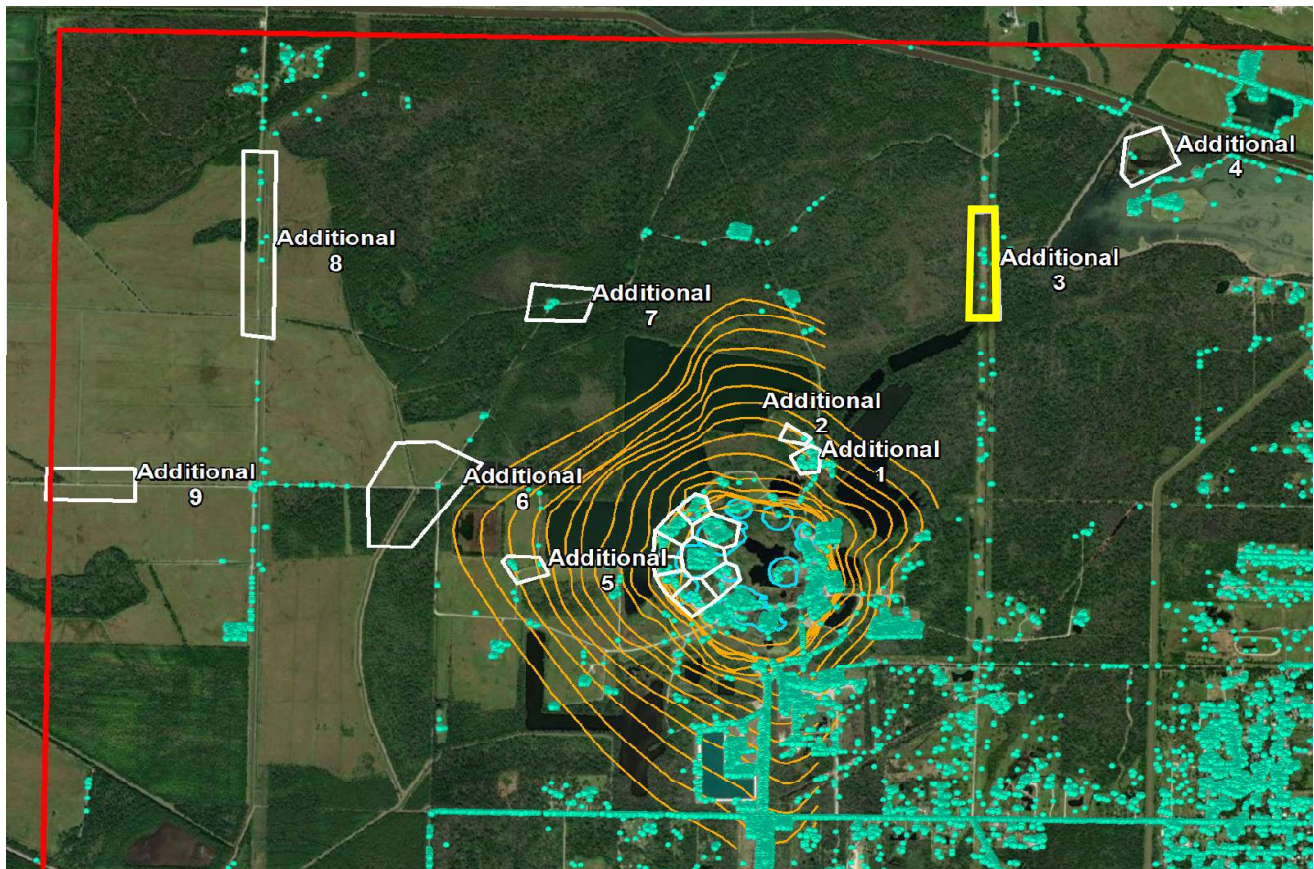


	Nonlinear Trend	Linear Trend
Velocity:	+0.51 in/yr	+0.08 in/yr
Acceleration:	+1.10 in/yr ²	0.00 in/yr ²

■ LOS Displacement Measurement

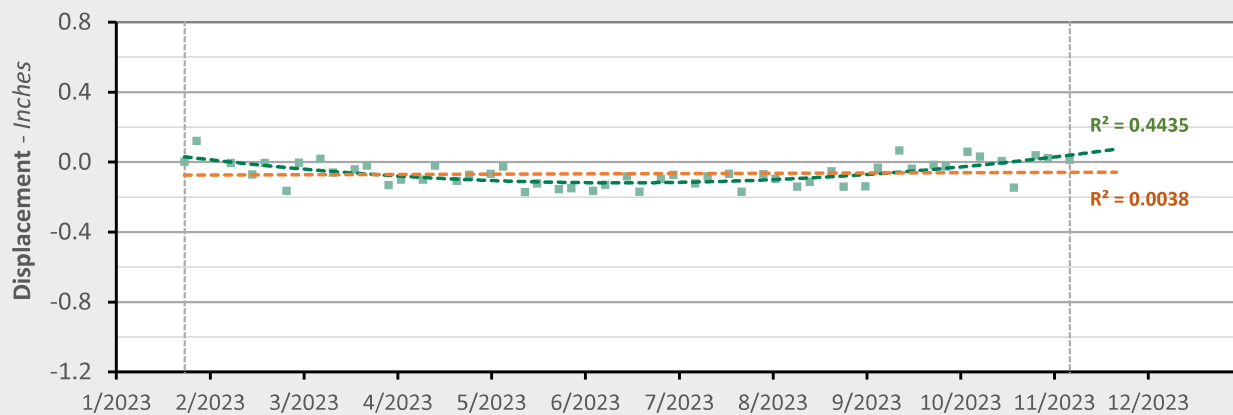
--- Nonlinear Trend Line
(Quadratic Regression)--- Linear Trend Line
(Linear Regression)

Additional 3 - Location Map



Additional 3 - Displacement Time Series

TSX/PAZ (11/6/2023) Point Count: 26

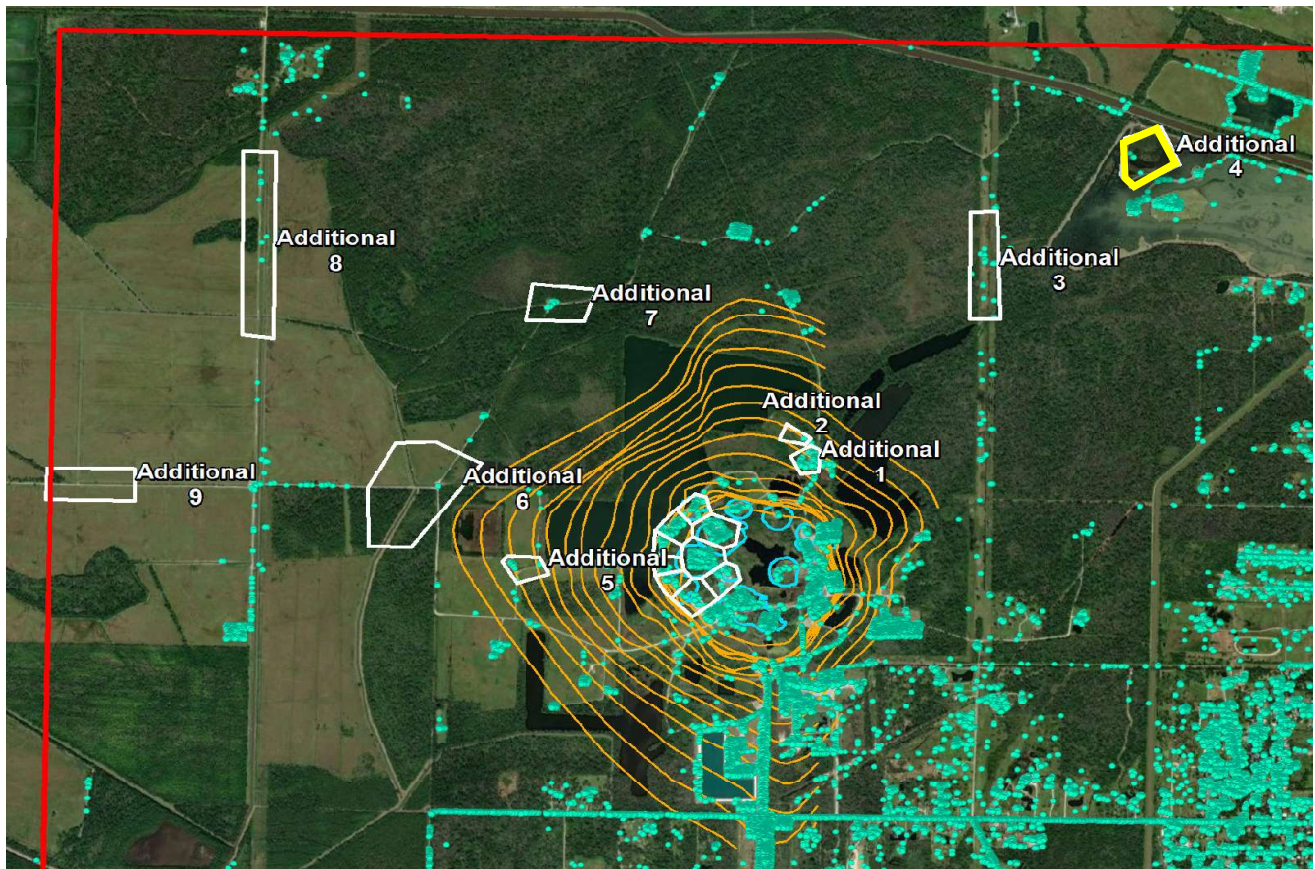


	Nonlinear Trend	Linear Trend
Velocity:	+0.80 in/yr	+0.02 in/yr
Acceleration:	+2.00 in/yr ²	0.00 in/yr ²

■ LOS Displacement Measurement

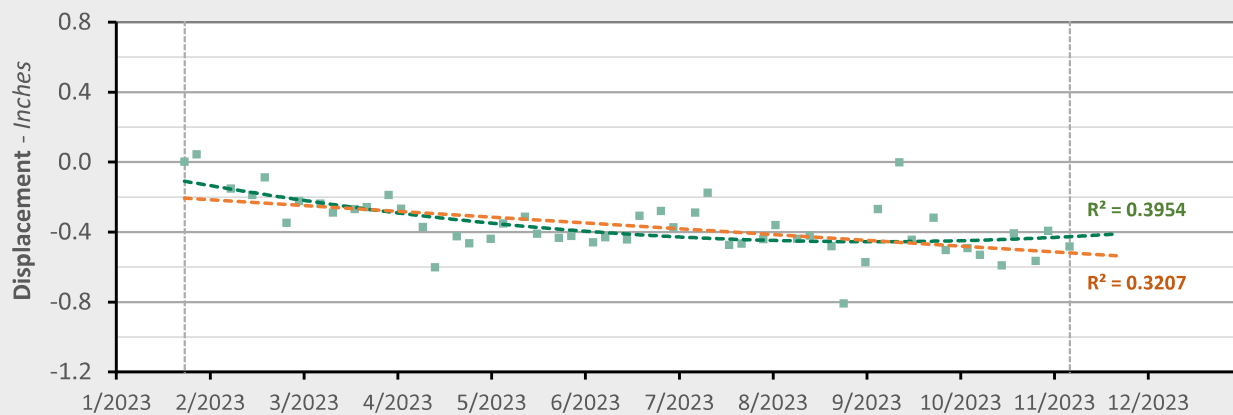
--- Nonlinear Trend Line
(Quadratic Regression)--- Linear Trend Line
(Linear Regression)

Additional 4 - Location Map



Additional 4 - Displacement Time Series

TSX/PAZ (11/6/2023) Point Count: 3

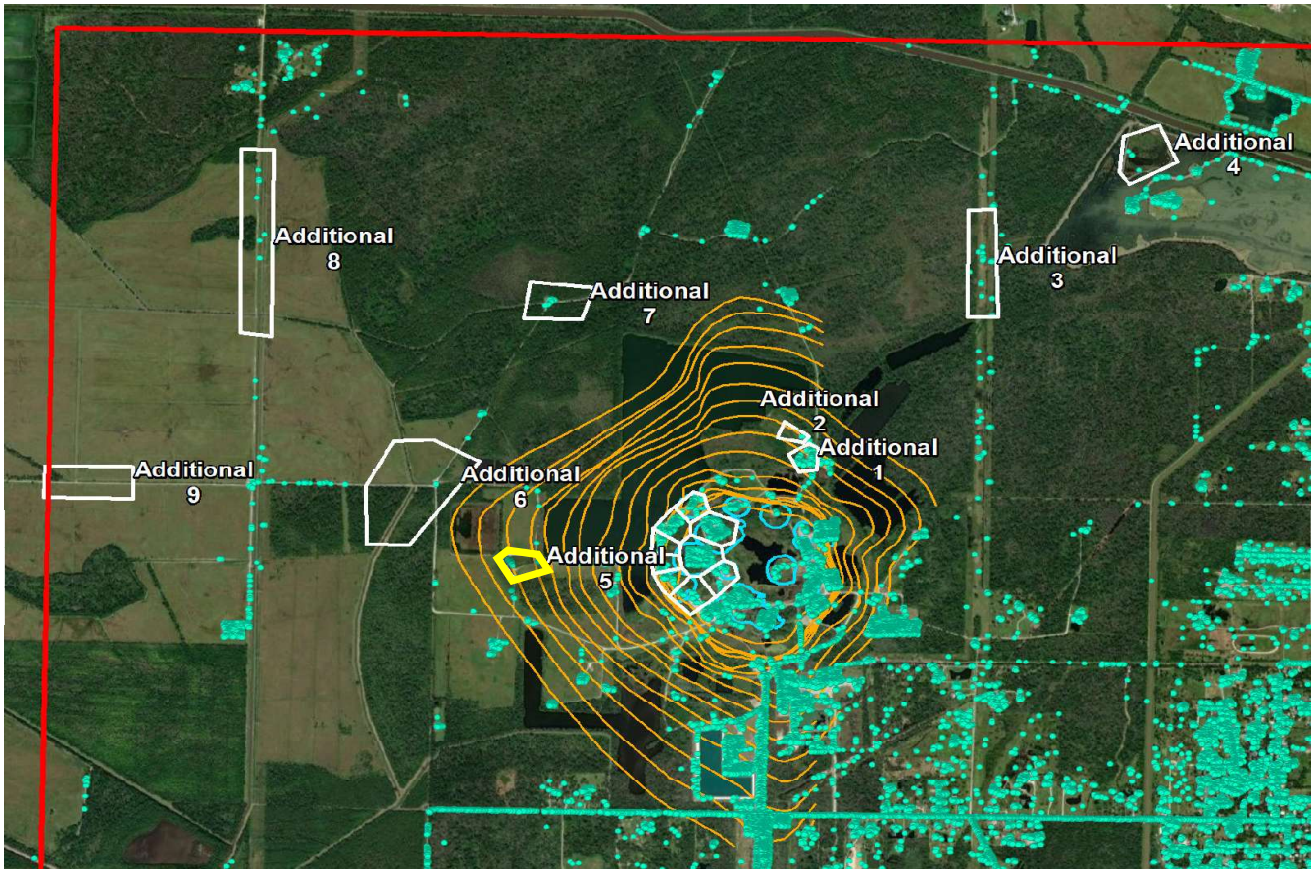


	Nonlinear Trend	Linear Trend
Velocity:	+0.33 in/yr	-0.40 in/yr
Acceleration:	+1.87 in/yr ²	0.00 in/yr ²

■ LOS Displacement Measurement

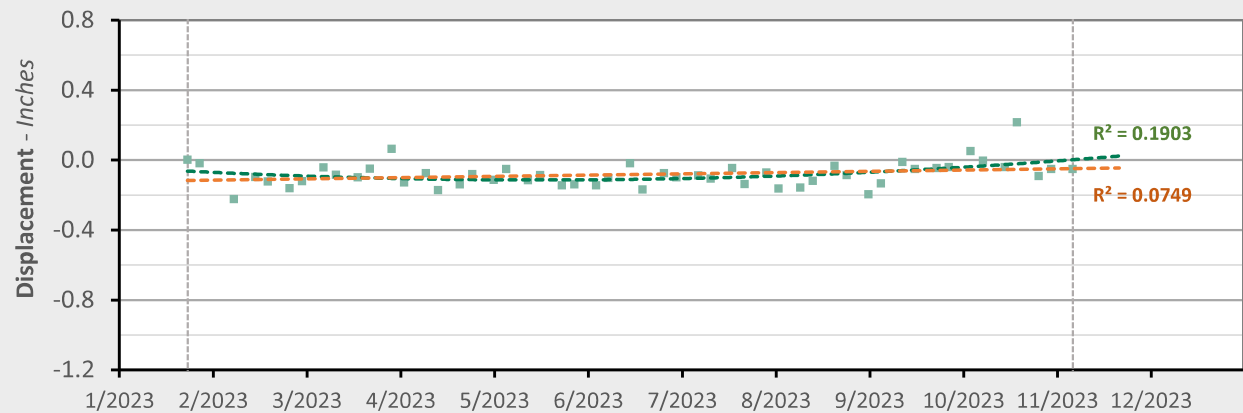
--- Nonlinear Trend Line
(Quadratic Regression)--- Linear Trend Line
(Linear Regression)

Additional 5 - Location Map



Additional 5 - Displacement Time Series

TSX/PAZ (11/6/2023) Point Count: 14



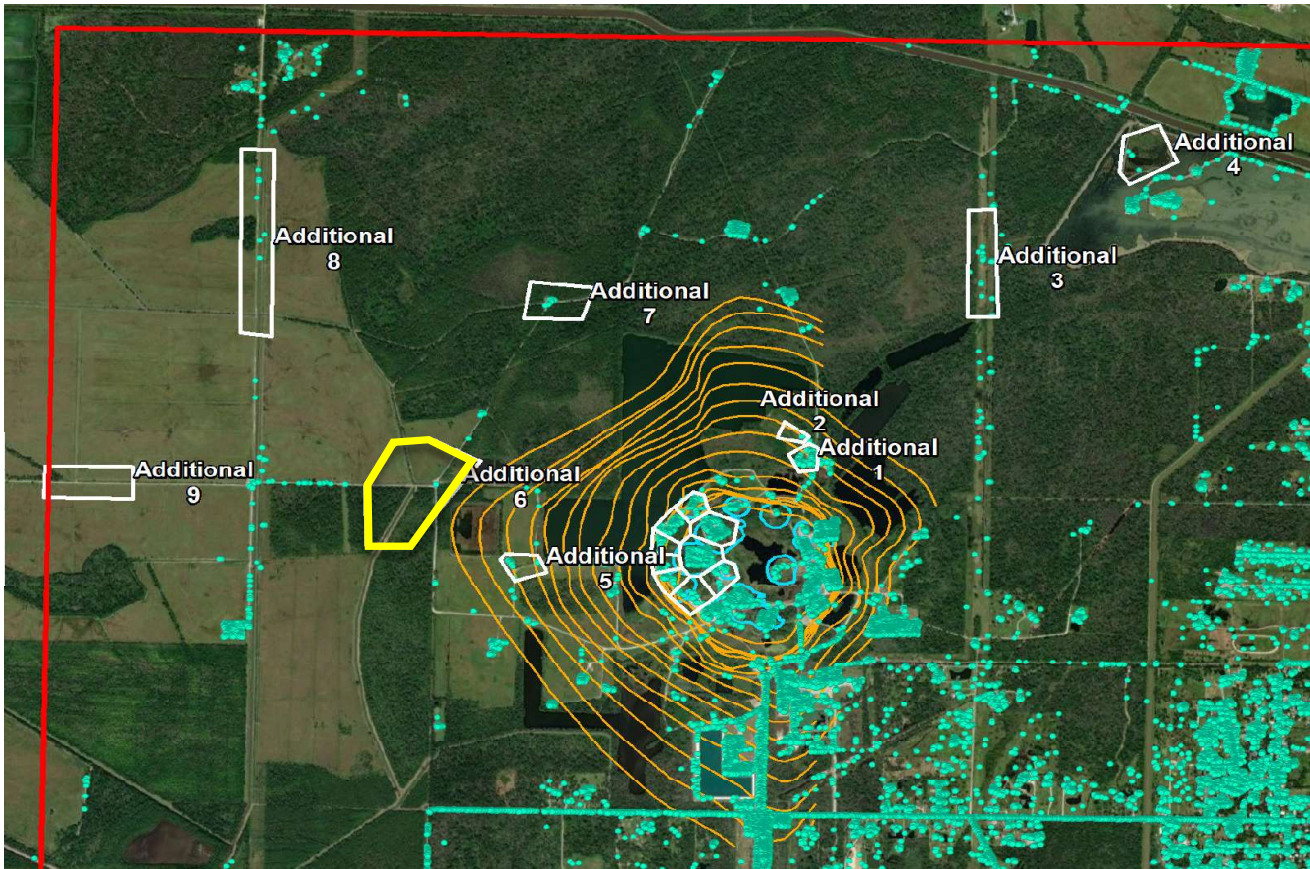
	Nonlinear Trend	Linear Trend
Velocity:	+0.49 in/yr	+0.09 in/yr
Acceleration:	+1.04 in/yr ²	0.00 in/yr ²

■ LOS Displacement Measurement

--- Nonlinear Trend Line
(Quadratic Regression)

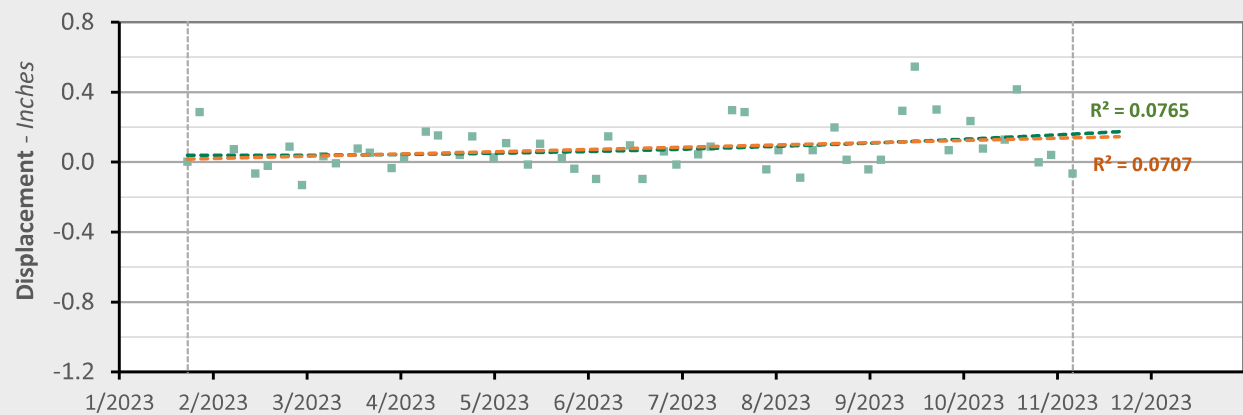
--- Linear Trend Line
(Linear Regression)

Additional 6 - Location Map



Additional 6 - Displacement Time Series

TSX/PAZ (11/6/2023) Point Count: 1



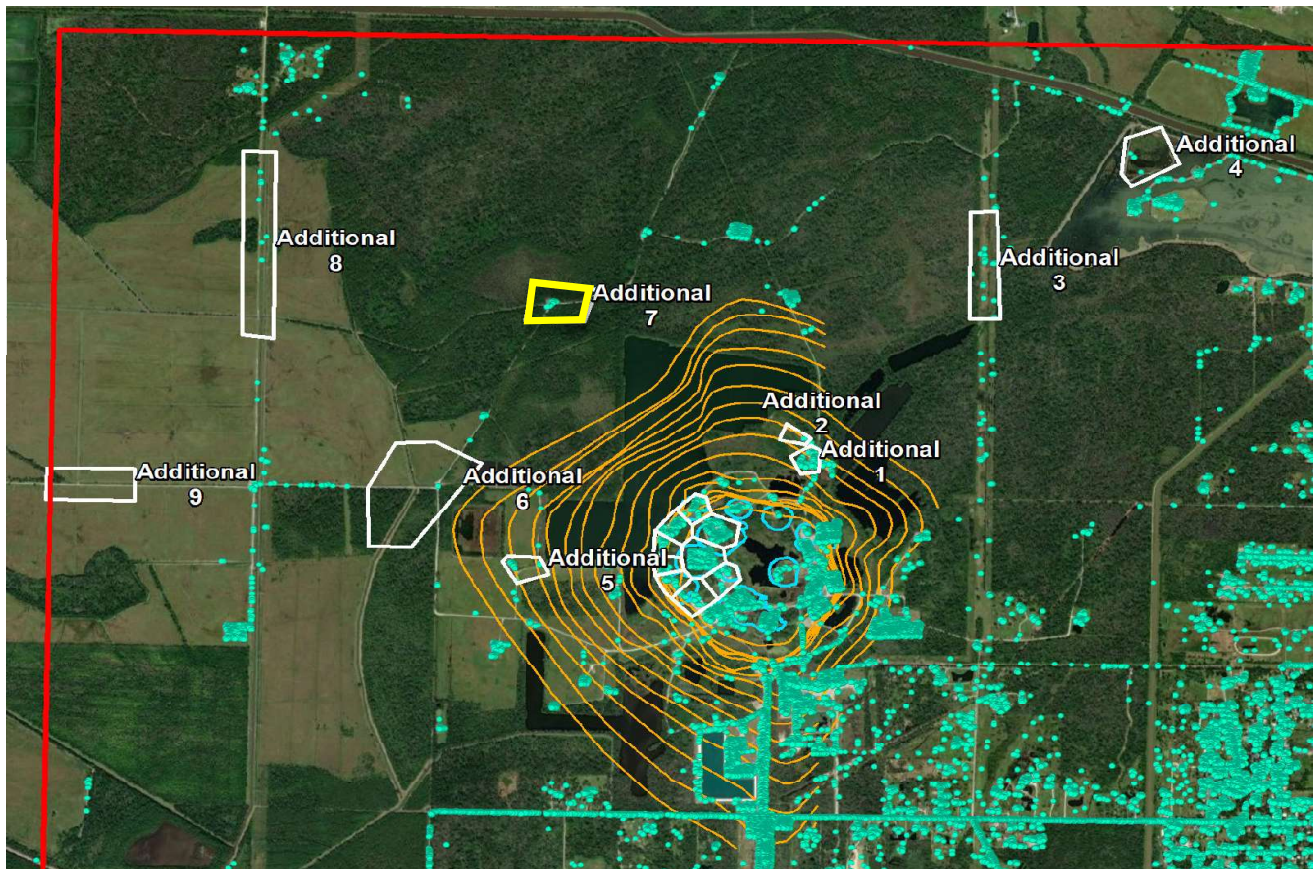
	Nonlinear Trend	Linear Trend
Velocity:	+0.33 in/yr	+0.16 in/yr
Acceleration:	+0.44 in/yr ²	0.00 in/yr ²

■ LOS Displacement Measurement

--- Nonlinear Trend Line
(Quadratic Regression)

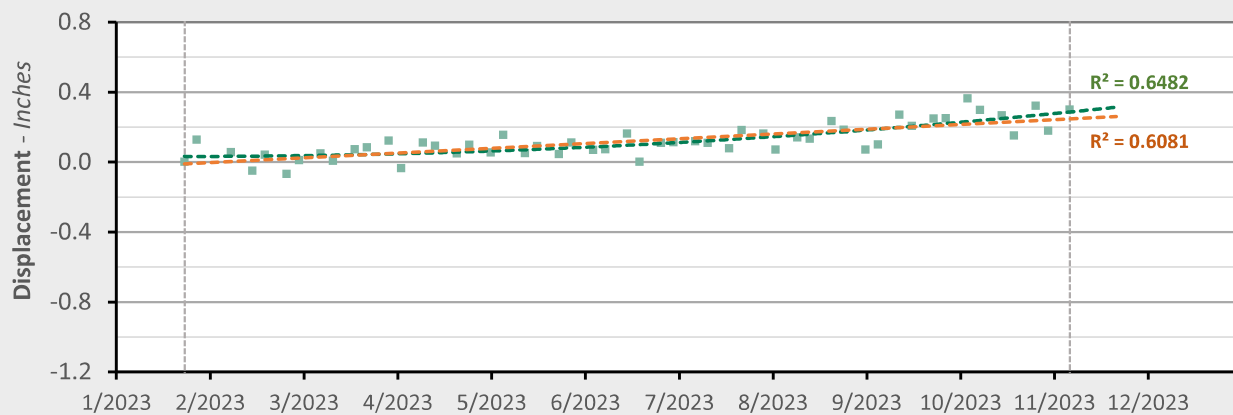
--- Linear Trend Line
(Linear Regression)

Additional 7 - Location Map



Additional 7 - Displacement Time Series

TSX/PAZ (11/6/2023) Point Count: 10

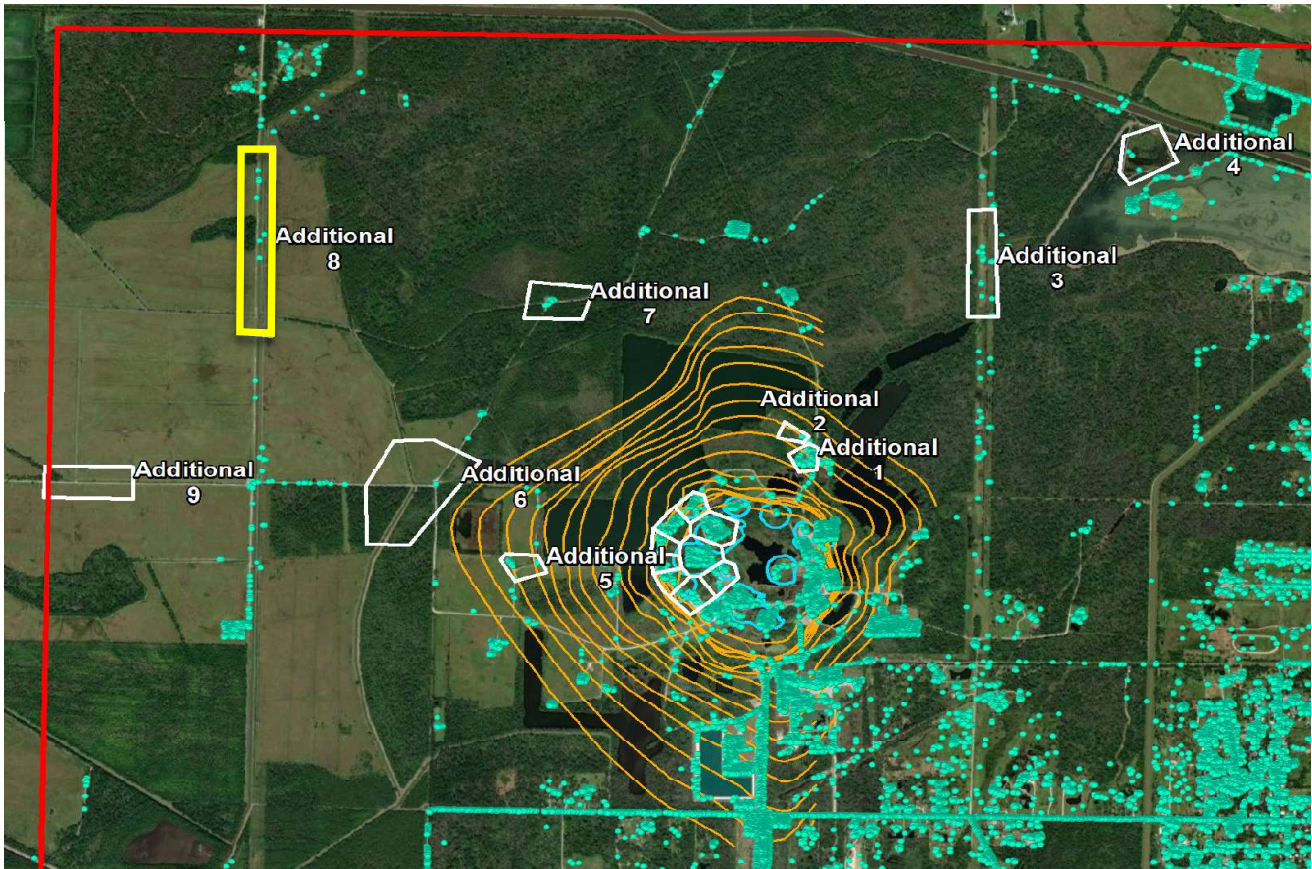


	Nonlinear Trend	Linear Trend
Velocity:	+0.65 in/yr	+0.33 in/yr
Acceleration:	+0.82 in/yr ²	0.00 in/yr ²

■ LOS Displacement Measurement

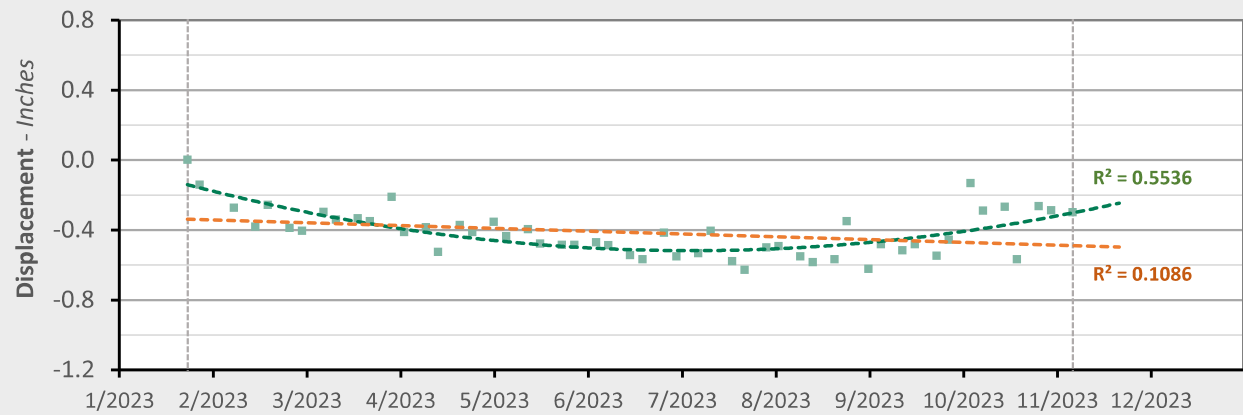
--- Nonlinear Trend Line
(Quadratic Regression)--- Linear Trend Line
(Linear Regression)

Additional 8 - Location Map



Additional 8 - Displacement Time Series

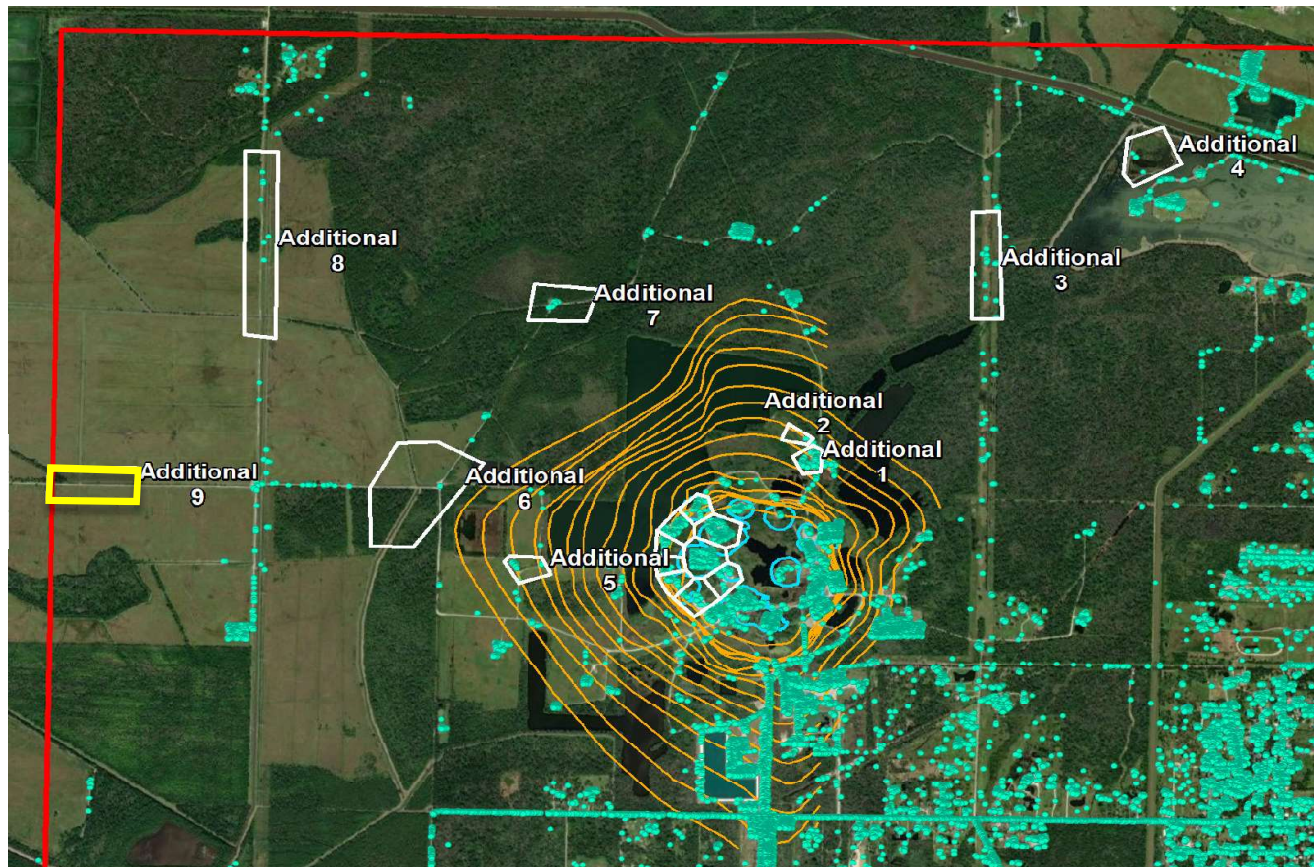
TSX/PAZ (11/6/2023) Point Count: 7



	Nonlinear Trend	Linear Trend
Velocity:	+1.28 in/yr	-0.19 in/yr
Acceleration:	+3.79 in/yr ²	0.00 in/yr ²

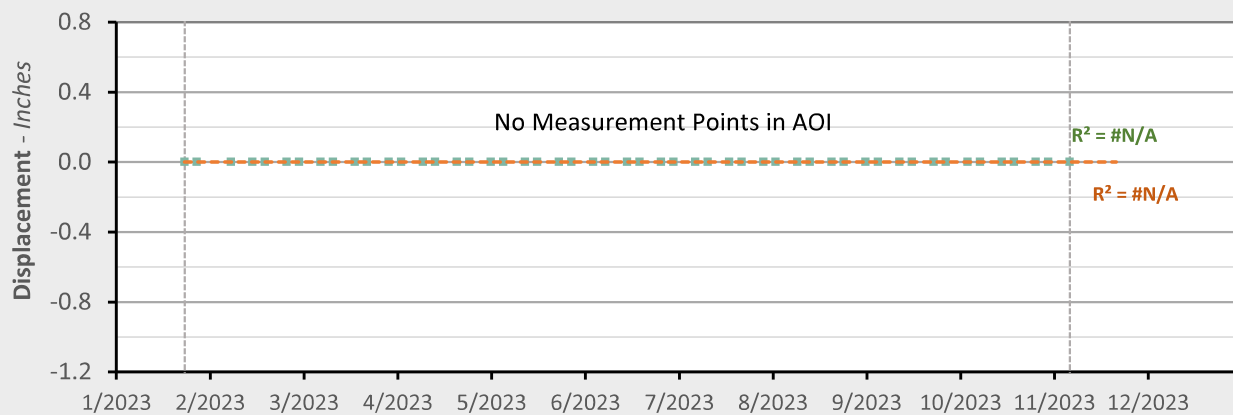
■ LOS Displacement Measurement - - - Nonlinear Trend Line (Quadratic Regression) - - - Linear Trend Line (Linear Regression)

Additional 9 - Location Map



Additional 9 - Displacement Time Series

TSX/PAZ (11/6/2023) Point Count: 0



Nonlinear Trend

Linear Trend

Velocity:	#VALUE!	in/yr	#VALUE!	in/yr
Acceleration:	#VALUE!	in/yr ²	0.00	in/yr ²

■ LOS Displacement Measurement

--- Nonlinear Trend Line
(Quadratic Regression)--- Linear Trend Line
(Linear Regression)