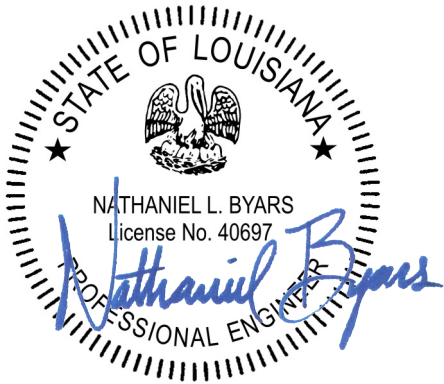


SNT Satellite Update

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

Sulphur Dome
Westlake Chemicals

April 7, 2023 Update



Date Signed: April 11, 2023
Austin, TX

Nathaniel L. Byars, P.E.
Principal Engineer
Louisiana License No. 40697

LONQUIST & CO. LLC

PETROLEUM
ENGINEERS

ENERGY
ADVISORS

Parameters of InSAR Dataset and Collection Frequency

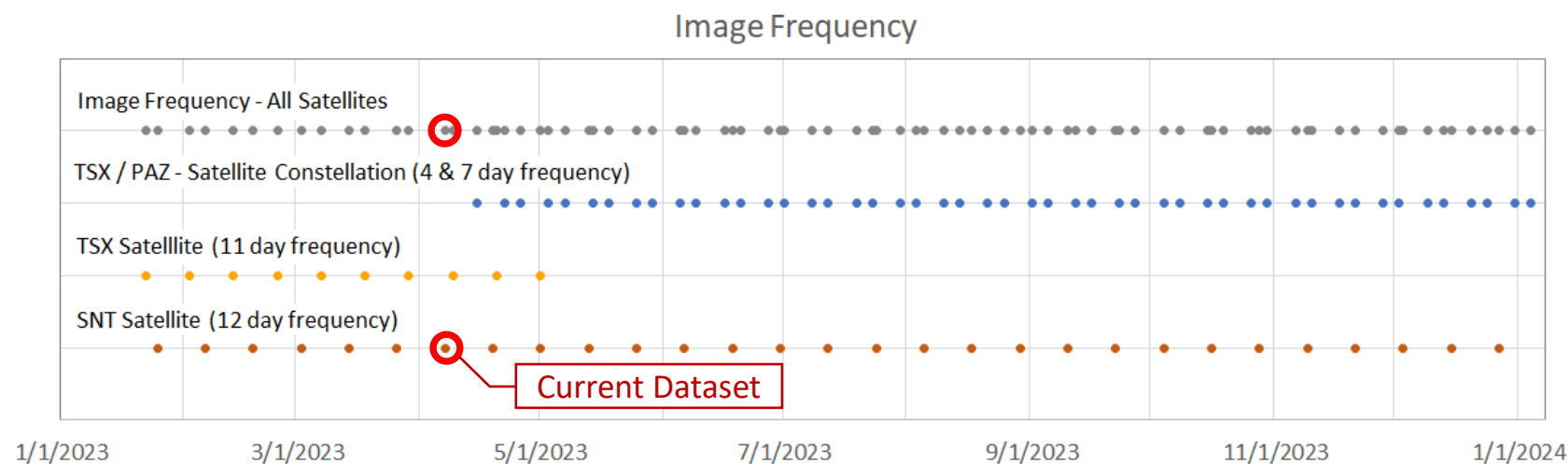
- Current Satellite and Data Delivery Frequency:

- Sentinel 1 (SNT)
12 days
- TerraSAR-X (TSX)
11 days
- 5.40-day avg. frequency

- Starting April 2023:

- Sentinel 1 (SNT)
12 days
- TSX / PAZ Constellation
4 & 7 days
- 3.96-day avg. frequency

	TSX/PAZ Constellation			
	Sentinel-1	TerraSAR-X	TerraSAR-X	PAZ
Mode / Resolution	16 x 65 ft	Spotlight (3 x 3 ft)	Spotlight (3 x 3 ft)	Spotlight (3 x 3 ft)
Track	T136	T29	T67	T120
Band (wavelength)	C-Band (2.32 in)	X-Band (1.22 in)	X-Band (1.22 in)	X-Band (1.22 in)
Nominal frequency	12- day	11- day	11- day	11- day
Orbit (LOS angle)	Ascending 43°	Descending 17°	Descending 37°	Descending 37°
Date range	04 Oct 2016 – 20 Jan 2024	16 Jun 2022 – 01 May 2023	24 Jan 2023 – 11 Jan 2024	28 Jan 2023 – 15 Jan 2024
Number of images	199	30	34	33

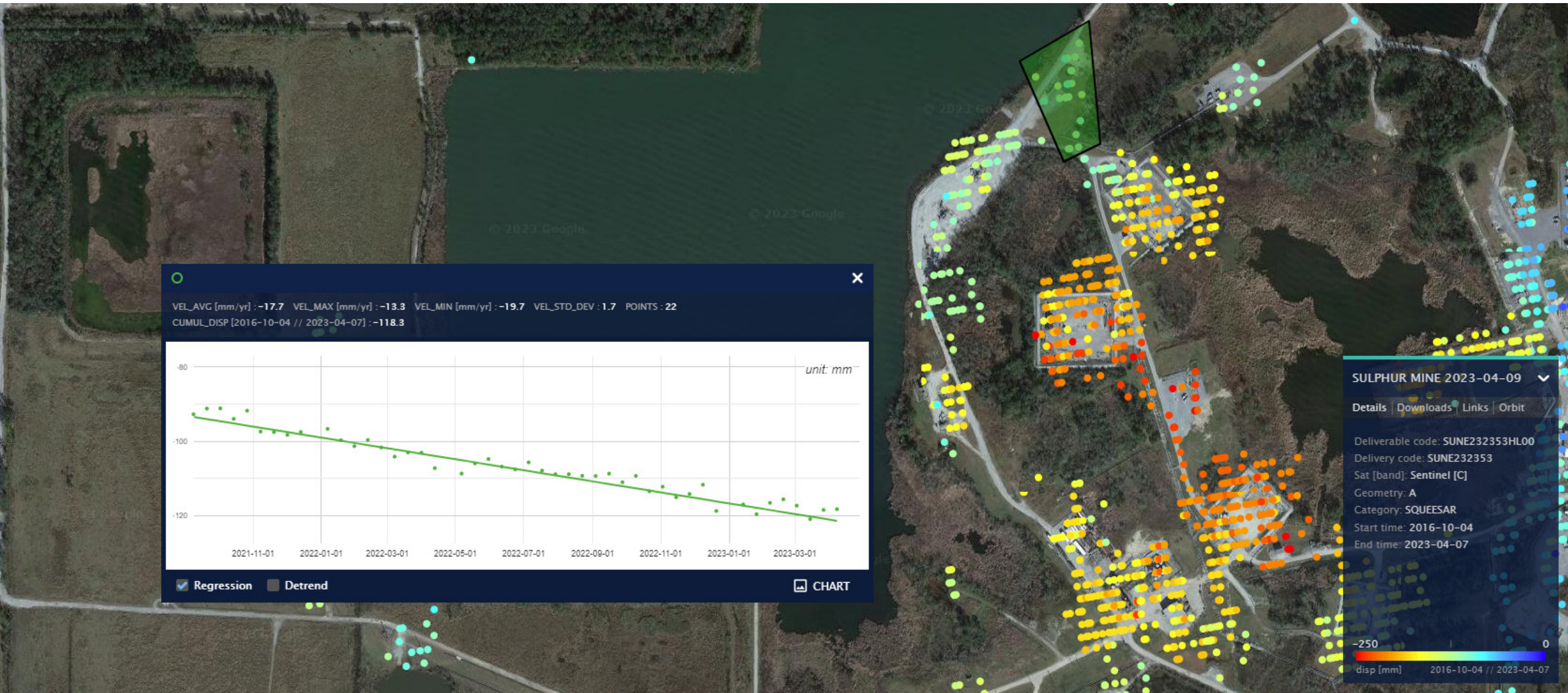


Overview and Monitoring History

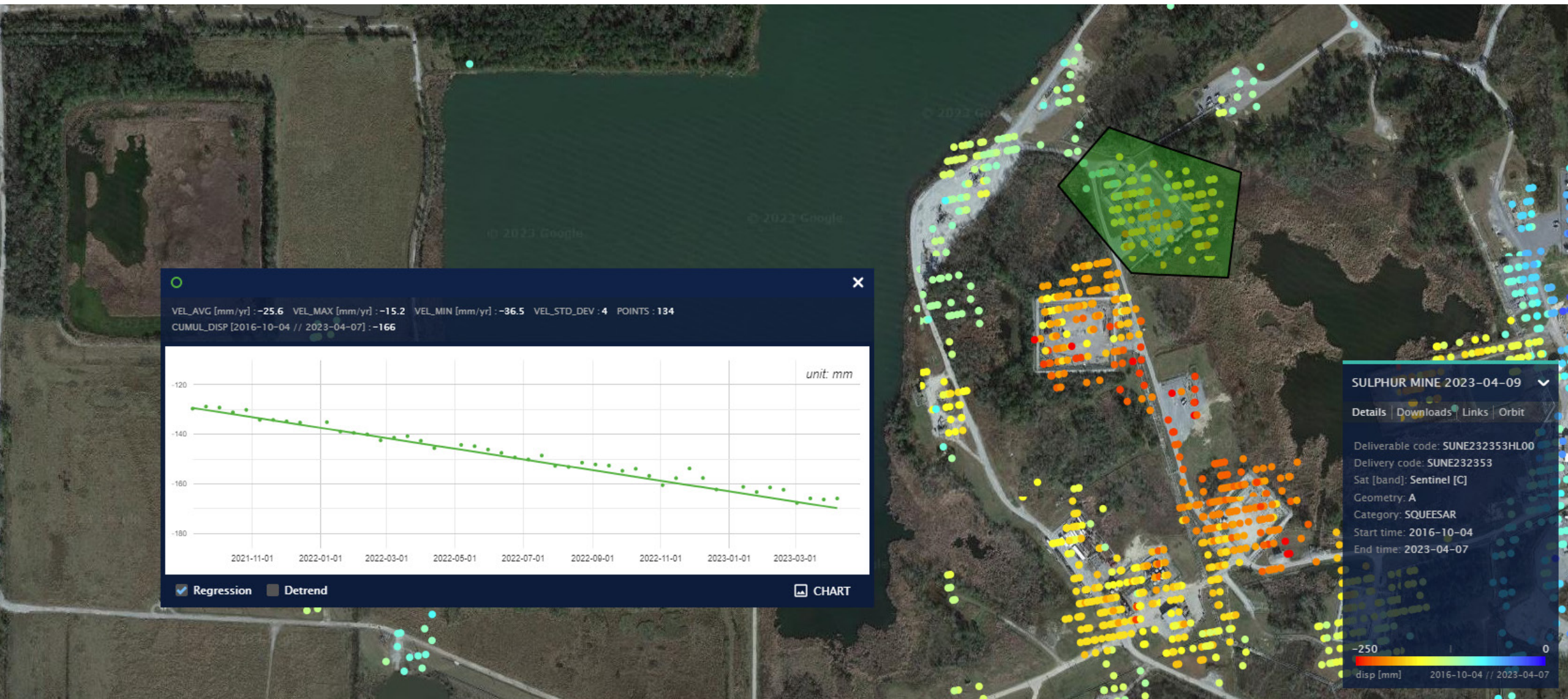
- Beginning in late January, ground displacement over the western portion of the Sulphur Mines Salt Dome has been evaluated following the delivery of each dataset update from TRE-Altamira
- An automated process and set of deliverables to convey the results of the datasets is being developed that will evaluate multiple factors including trend consistency and mapped acceleration of ground displacement
- Current updates are focused on the review of time series charts of averaged data for selections of points around the dome and caverns on the western flank
- The SNT satellite (12-day revisit) passed by Sulphur on Friday April 7, 2023
- The following slides present the time series and associated linear trends for each location evaluated from this dataset
- To-date there has been no material deviation from the established subsidence trends in the areas investigated

SNT Satellite – April 7, 2023 Update

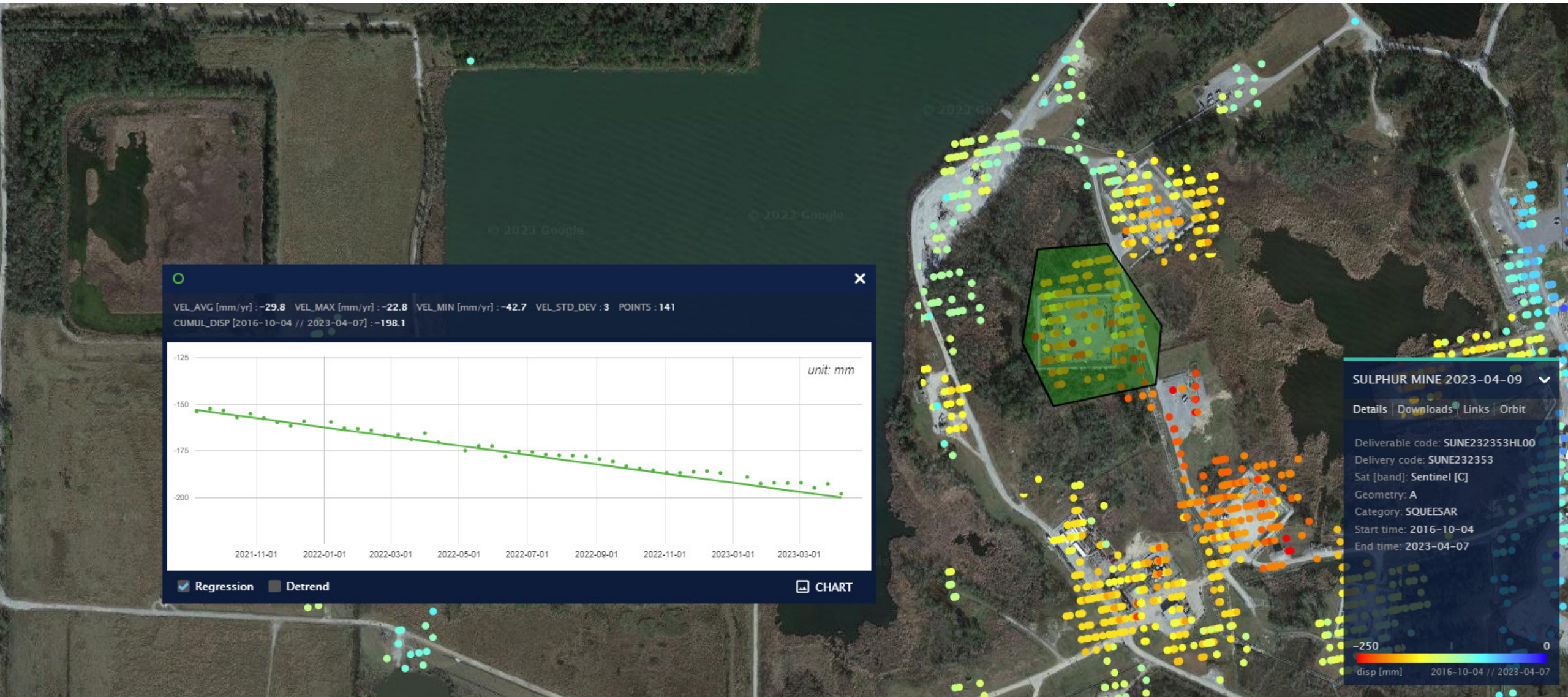
PPG 21



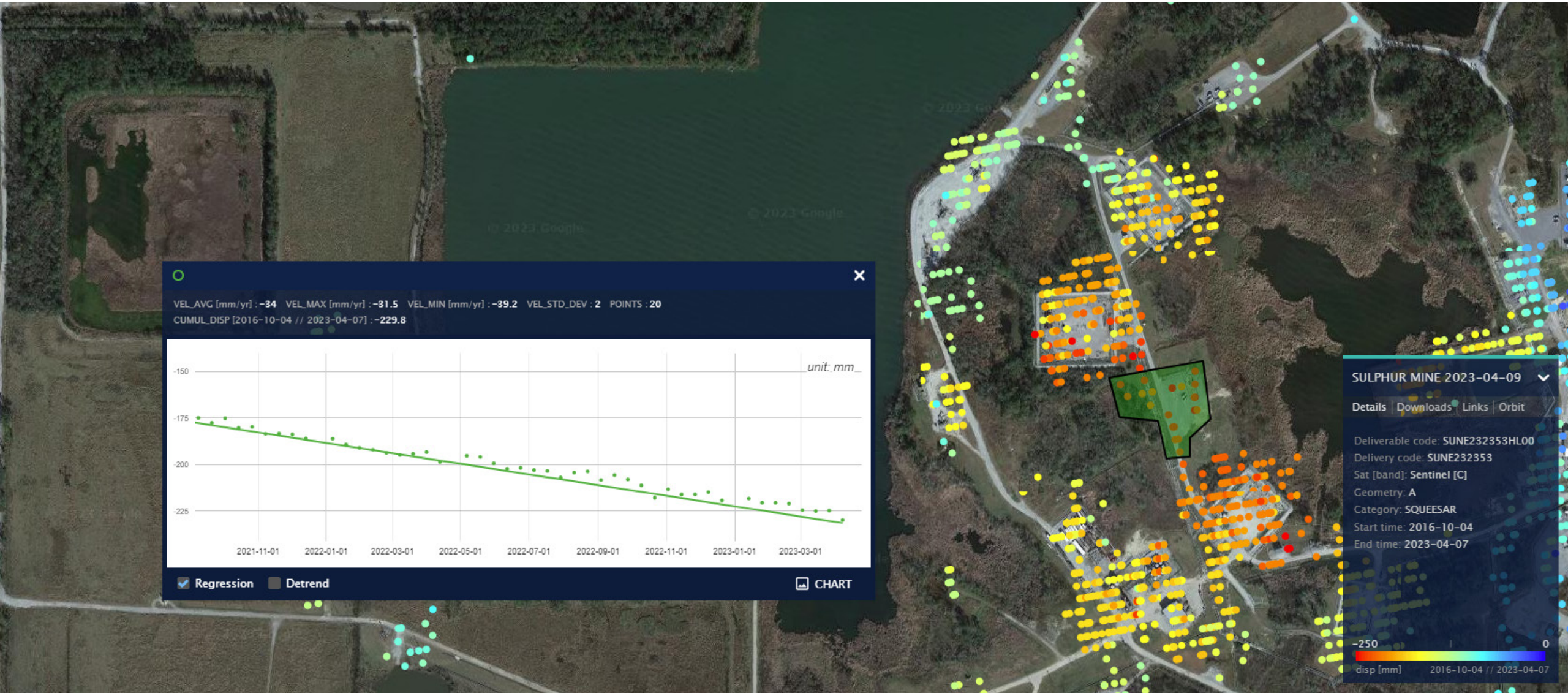
PPG 6



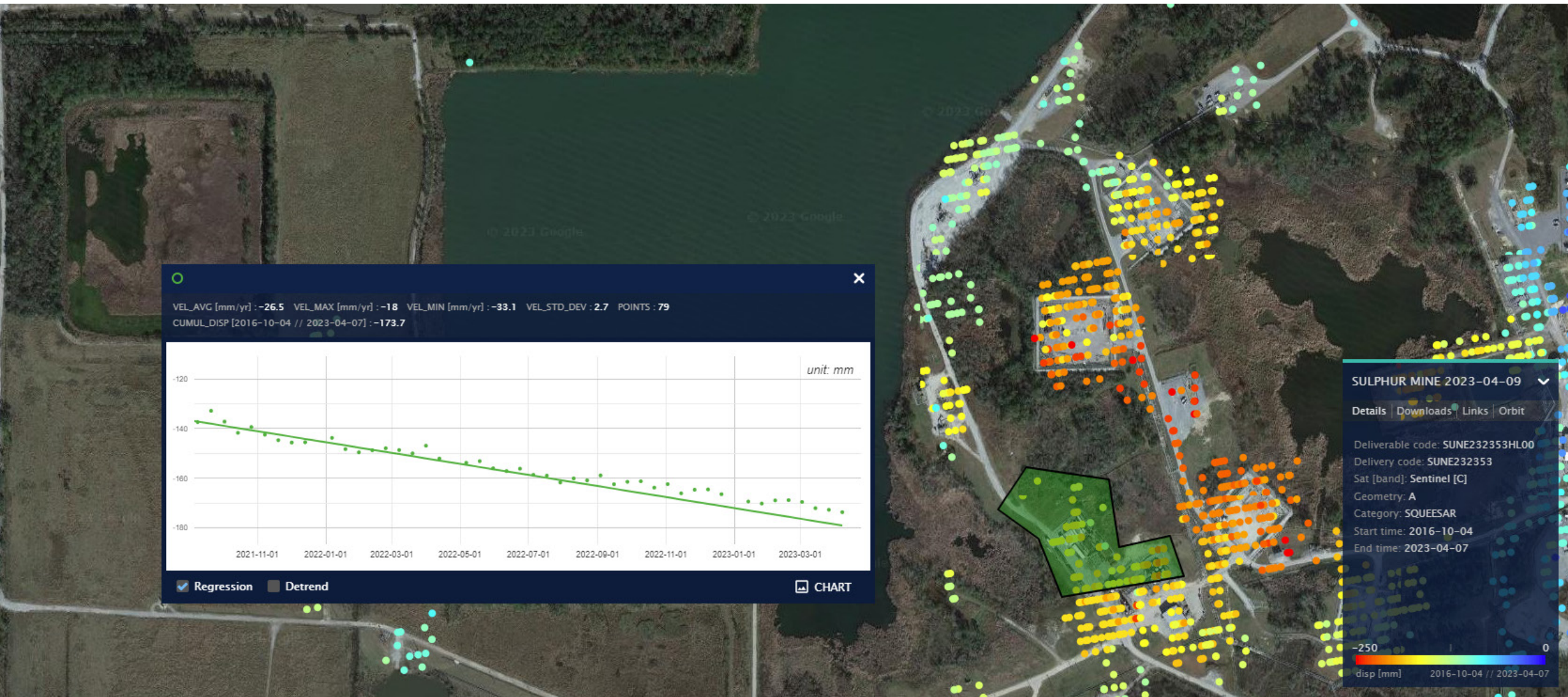
PPG 7



PPG 22



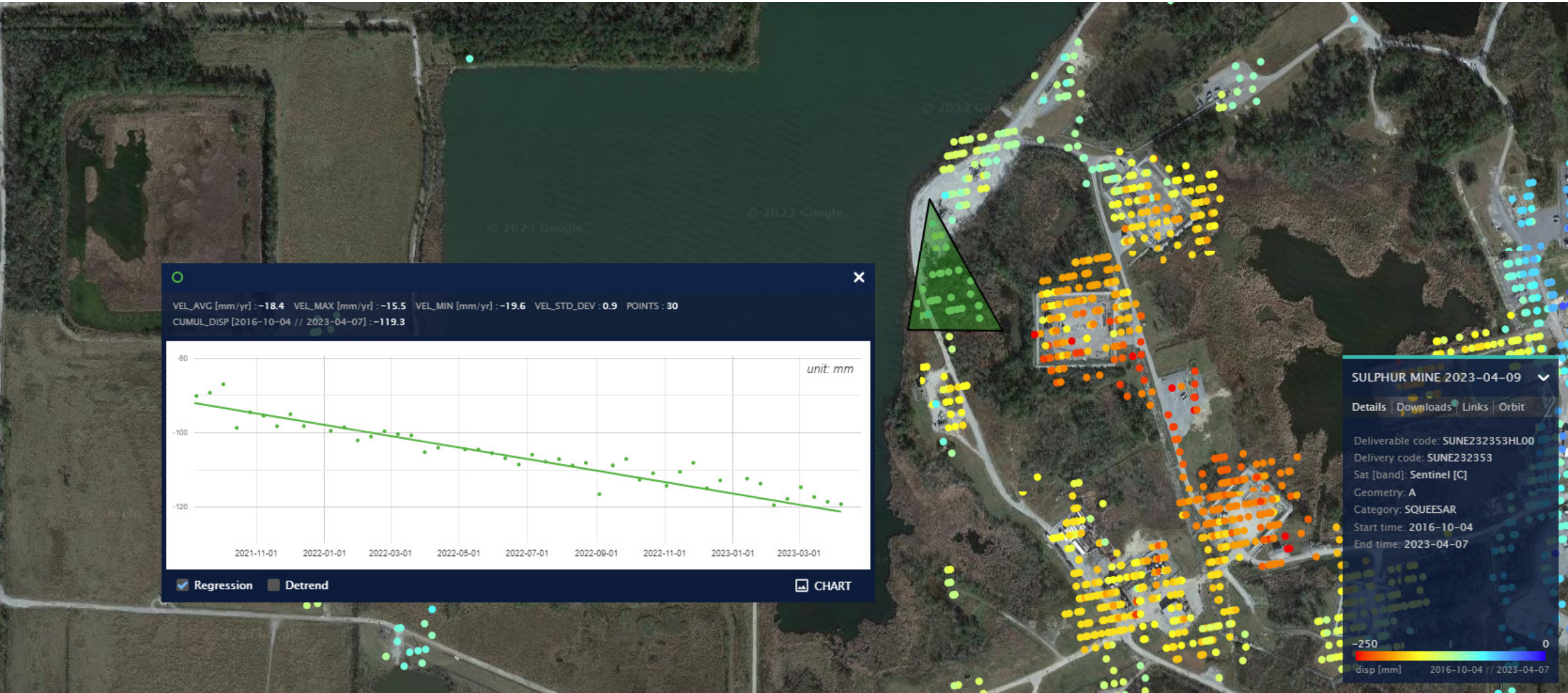
AOI #1



AOI #2



AOI #3



AOI #4

