Stantec

Memo

To:	Amy Driessen Transportation and Economic Corridors	From:	Leslie Cho and Lawrence Onwude Stantec Consulting Ltd.
File:	123315222	Date:	October 31, 2025

Reference: North Central Region, Stony Plain, Site NC079 – Wedgewood Ravine Slides, Fall 2025 Instrumentation Monitoring Report

1.0 OBSERVATIONS

1.1 FIELD PROGRAM AND INSTRUMENTATION STATUS

NC079 was added to the Spring 2025 monitoring cycle. One slope inclinometer (SI20-02) was read during the Fall 2025 reading cycle. SI20-01 was found blocked at 6 m below ground surface in May 2025. **Figure-1** attached provides a site plan of NC079. The instrument was read by Akintola Fakinlede, GIT and Adham Zahr, Geotechnical EIT on October 3, 2025.

The SI was measured using an RST MEMS digital inclinometer probe with 0.5 m increments and handheld PC. Readings were taken based on cable markings in relation to the top of SI casing.

GPS coordinates of the instrument were obtained using a Garmin eTrex 10 handheld GPS unit.

NC079 was repaired using soil nails in 2022 as part of the Southwest Anthony Henday Drive Widening work. Both SI20-01 and SI20-02 were installed by the geotechnical consultant working on the widening project. The historical data were transferred to Stantec as part of the Geohazard Risk Management Program for subsequent instrument monitoring in Spring 2025.

2.0 INSTRUMENTATION READINGS

2.1 GENERAL

The SI plots are provided in the attachments and summarized in the following sections. Displacement-time plots along with movement rates, total cumulative movement, maximum movement rates, and incremental movements since initializing the SI are provided in **Table NC079-1** and the attachments.

2.2 ZONES OF MOVEMENT

Two potential zones of movement from 0.2 m to 2.2 m and from 2.7 m to 7.2 m below ground level were observed in SI20-02 within the clay fill layer.

2.3 MONITORING RESULTS

2.3.2 Slope Inclinometer

SI20-02 has recorded 6 mm and 9 mm in the upper and lower zones of cumulative movement, respectively, since initialization in 2020.

Reference: **North Central Region, Stony Plain, Site NC079 – Wedgewood Ravine Slides, Fall 2025 Instrumentation Monitoring Report**

3.0 RECOMMENDATIONS AND REPAIRS

It is recommended that the SI be read in the Spring 2026 reading cycle.

No repairs are required at this site.

Reference: **North Central Region, Stony Plain, Site NC079 – Wedgewood Ravine Slides, Fall 2025 Instrumentation Monitoring Report**

Table NC079-1: Fall 2025 Slope Inclinometer Reading Summary

Instrument Name	Date Initialized	Coordinates (1) (UTM 12N, NAD1983) (m)		Total Cumulative Resultant Movement and Depth of Movement to Date (mm)	Maximum Rate of Movement (mm/yr)	Current Status	Date of Previous Reading	Incremental Movement Since Previous Reading (mm)	Rate of Movement (mm/yr)	Change in Rate of Movement Since Previous Reading (mm/yr)(2)
		Northing	Easting							
SI20-01	Nov 2, 2020	5927945	324216	9 over 0.7 m to 2.2 m depth in 0° direction	41 mm/yr; July 2021	Non-Operational	Sep 22, 2022	Blocked at 6 m		
SI20-02	Nov 2, 2020	5927956	324201	6 over 0.2 m to 2.2 m depth in 130° direction	5 mm/yr; Oct 2024	Operational	May 9, 2025	-2	4	4
				-9 over 2.7 m to 7.2 m depth in 130° direction	2 mm/yr; Oct 2025			-<1	2	2

Note:
(1) Operational instruments were updated October 3, 2025, with approximate accuracy of ± 3 m.
(2) Negative (-) indicates decrease in rate of movement and/or change in direction of movement.

Reference: **North Central Region, Stony Plain, Site NC079 – Wedgewood Ravine Slides, Fall 2025 Instrumentation Monitoring Report**

4.0 CLOSING

We trust this instrumentation report meets your requirements. If you have any questions, please do not hesitate to contact the undersigned.

Stantec Consulting Ltd.

PROFESSIONAL ENGINEER ALBERTA
LESLIE CHO
October 31, 2025
ID# 139079

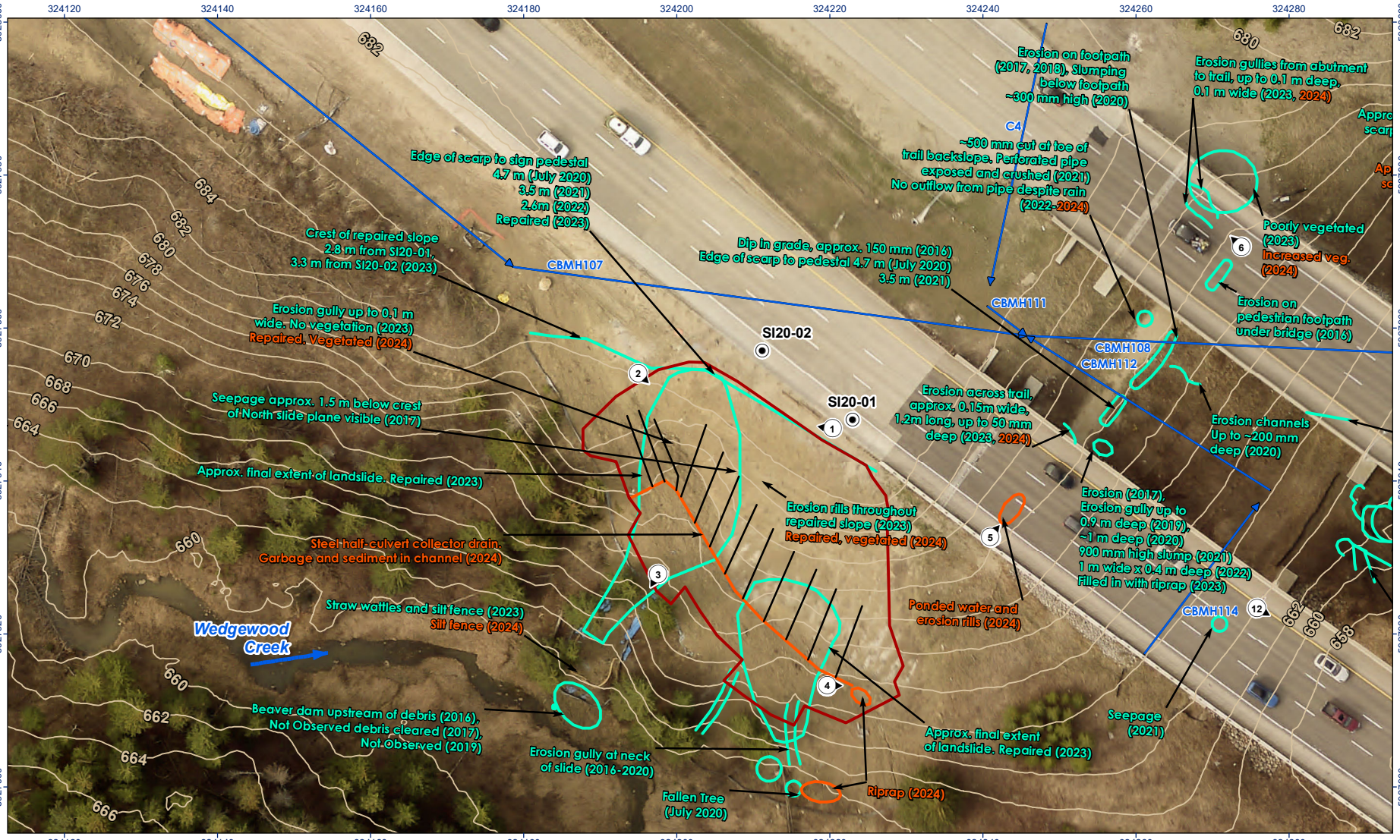
31-Oct-2025

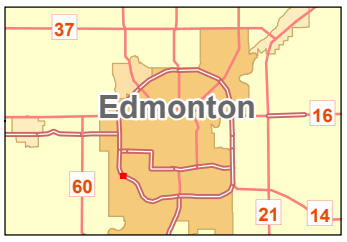
Leslie Cho M.Eng., P.Eng.
Senior Associate, Geotechnical Engineer
Phone: 780-917-7403
leslie.cho@stantec.com

Lawrence Onwude M.Eng., P.Eng.
Senior Associate, Geotechnical Engineer
Phone: 780-969-2257
lawrence.onwude@stantec.com

Attachment: Figure 1 – Site Plan
SI20-02 Slope Inclinometer Plots

PERMIT TO PRACTICE
STANTEC CONSULTING LTD.
Signature ID# 74389
Date 6-Nov-2025
PERMIT NUMBER: P 0258
The Association of Professional Engineers and Geoscientists of Alberta





- Buried Pipe
- Construction / Remediation Limit
- Perforated Drains
- Previous Observation
- 2024 Observation
- Instrument Location
- Photo Number and Direction
- Ground Elevation Contours (m AMSL, LiDAR April-May 2018)

N

0 10 20 metres

(At original document size of 8.5x11)
1:750

Notes

1. Coordinate System: NAD 1983 CSRS UTM Zone 12N
2. Base features: Geogratis, ©Department of Natural Resources Canada, All rights reserved.
3. Imagery: City of Edmonton 2023

Stantec

Project Location
Edmonton, Alberta

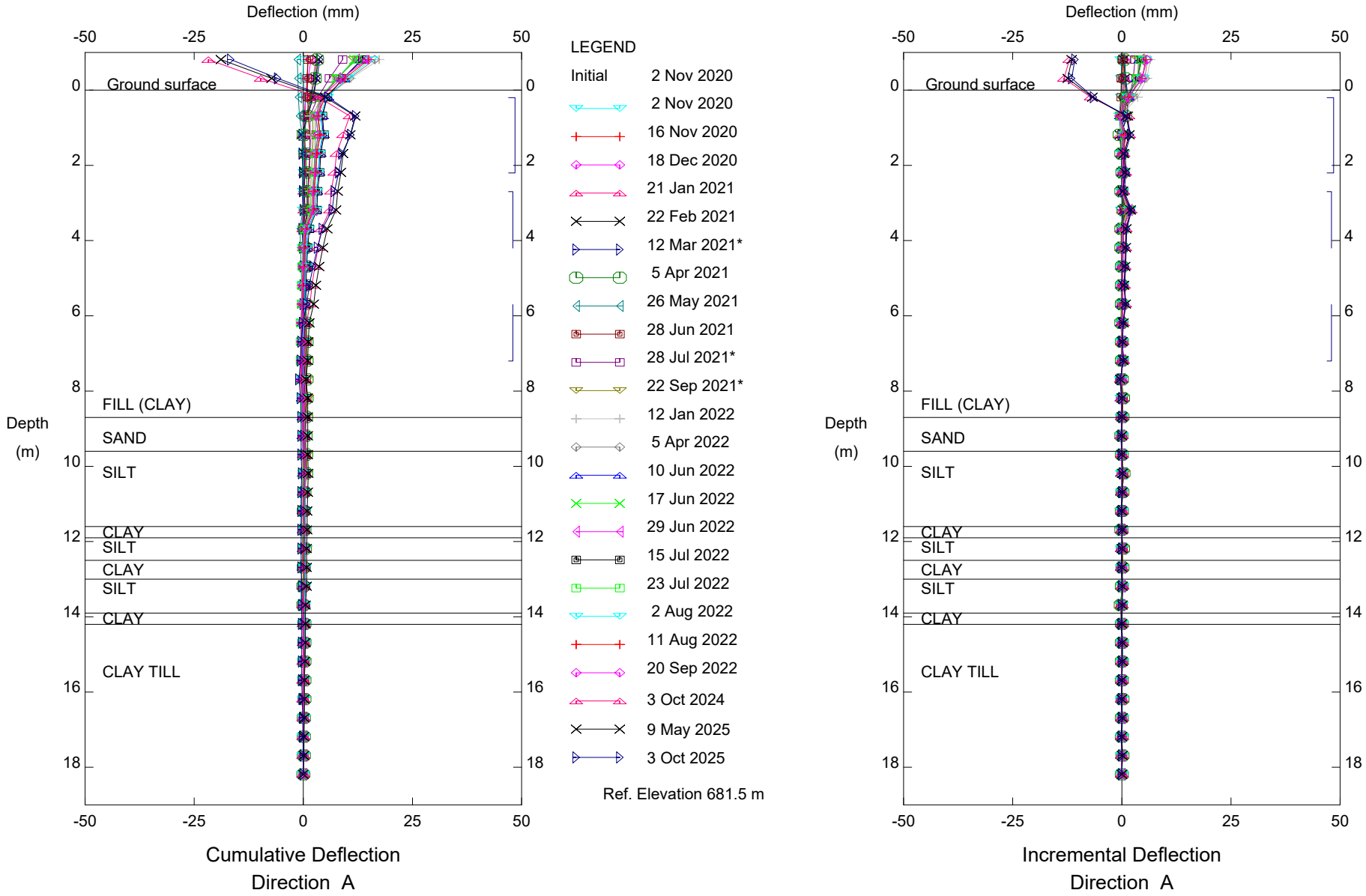
Prepared by SP on 2024-10-13
QR by SP on 2024-10-13
IR by LC on 2024-10-13

Client/Project 123315222
Transportation and Economic Corridors
Geohazard Monitoring Program
NC79 Wedgewood Ravine Slides

Figure No.
1

Title
Site Plan

Stantec Consulting Ltd - Edmonton

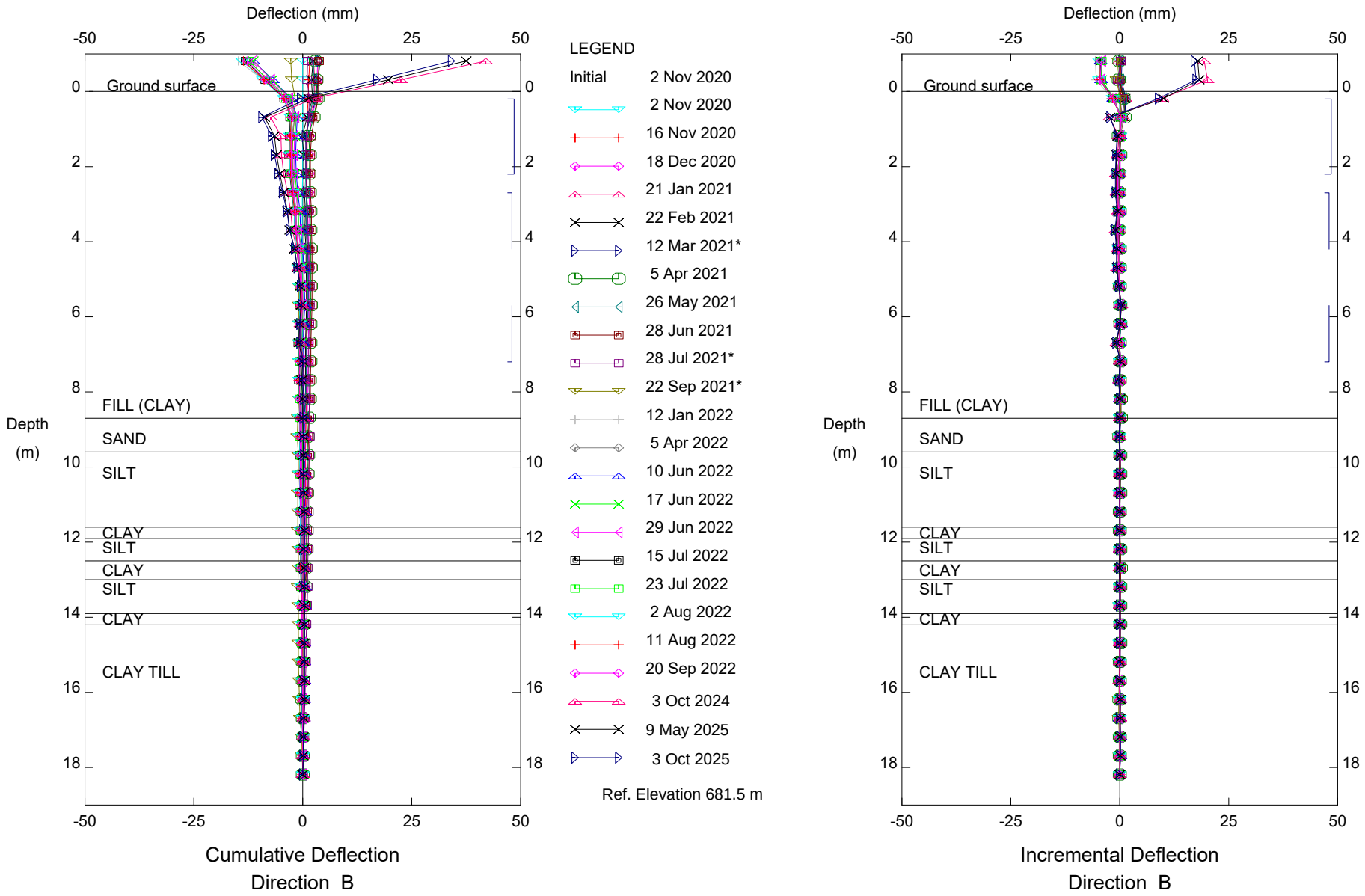


Wedgewood AHD, Inclinometer SI20-02

Sets marked * include zero shift and/or rotation corrections.

V:\1233\active\123315222\03_data\field\instrumentation\NC079\2025_fall\SI20-02_S2025.gtl

Stantec Consulting Ltd - Edmonton

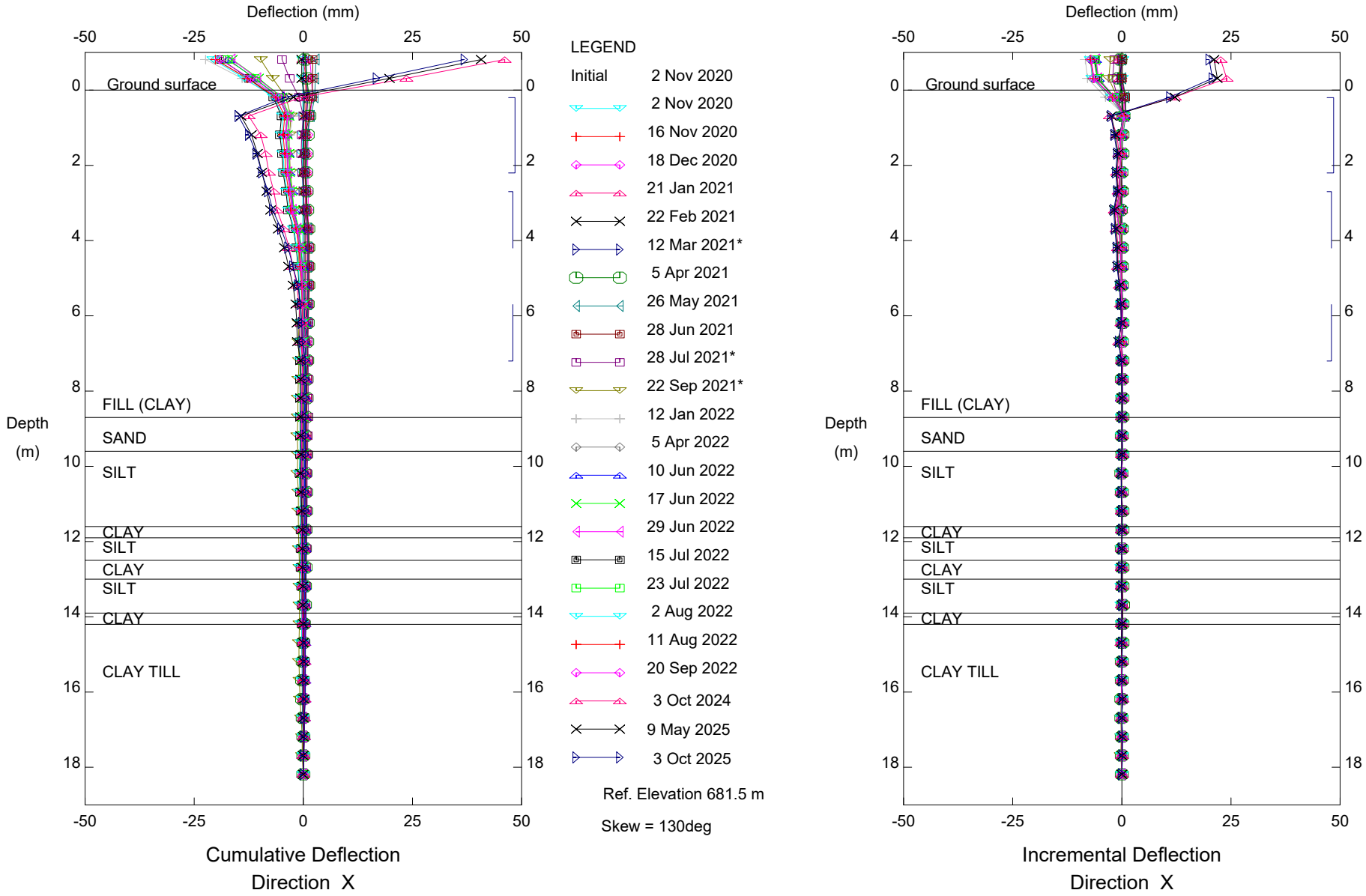


Wedgewood AHD, Inclinometer SI20-02

Sets marked * include zero shift and/or rotation corrections.

V:\1233\active\123315222\03_data\field\instrumentation\NC079\2025_fall\SI20-02_S2025.gtl

Stantec Consulting Ltd - Edmonton

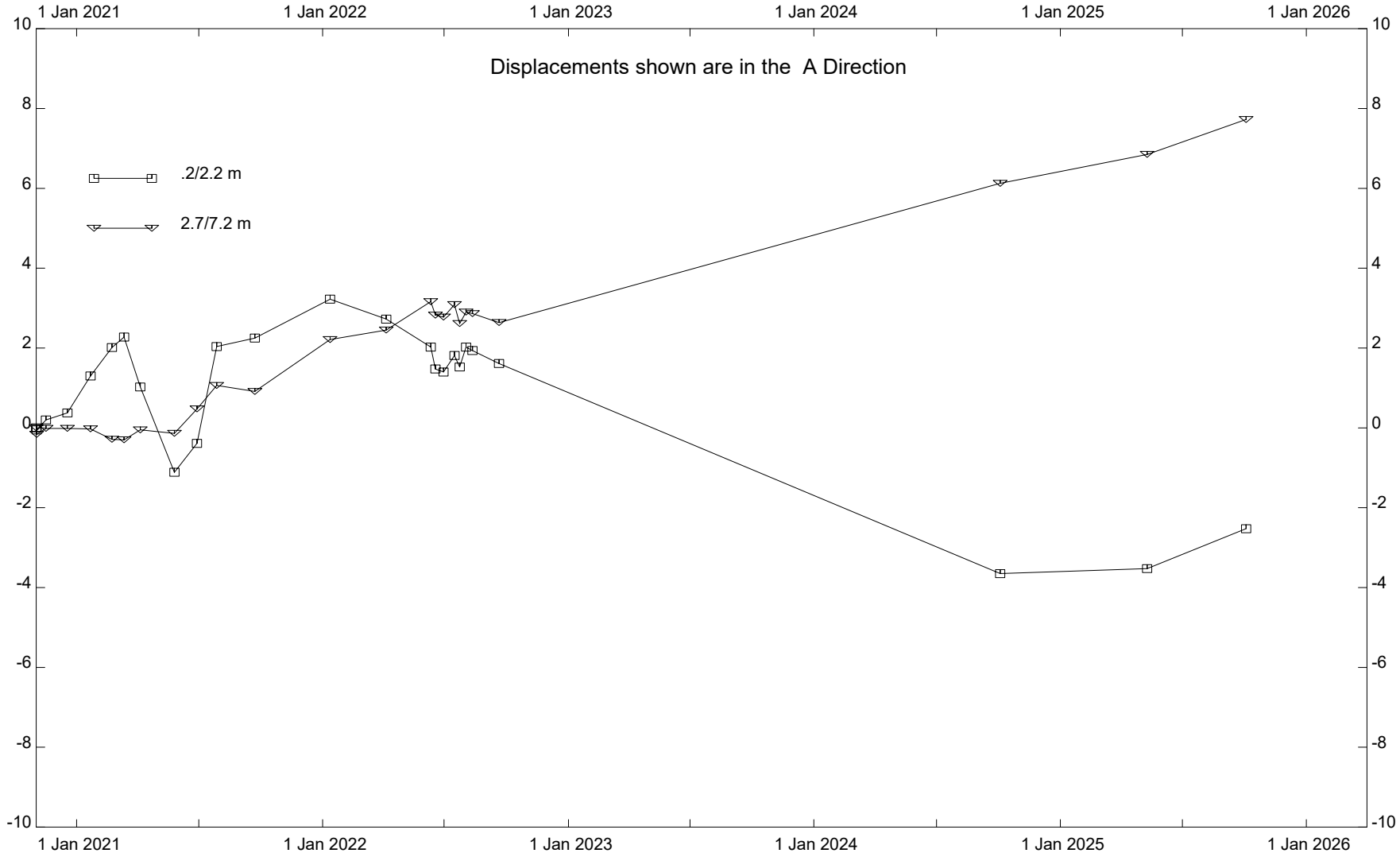


Wedgewood AHD, Inclinometer SI20-02

Sets marked * include zero shift and/or rotation corrections.

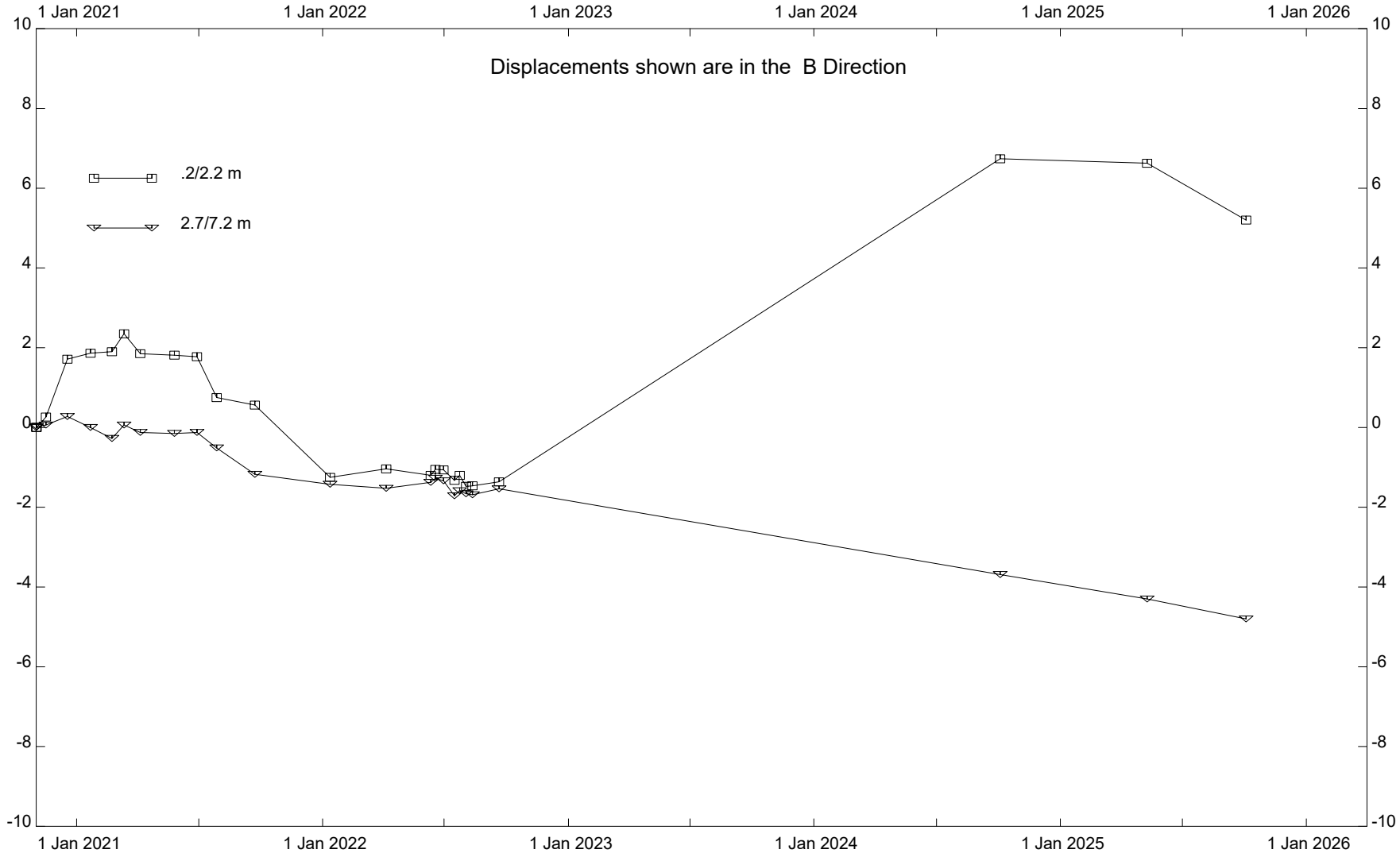
V:\1233\active\123315222\03_data\field\instrumentation\NC079\2025_fall\SI20-02_S2025.gtl

Stantec Consulting Ltd - Edmonton



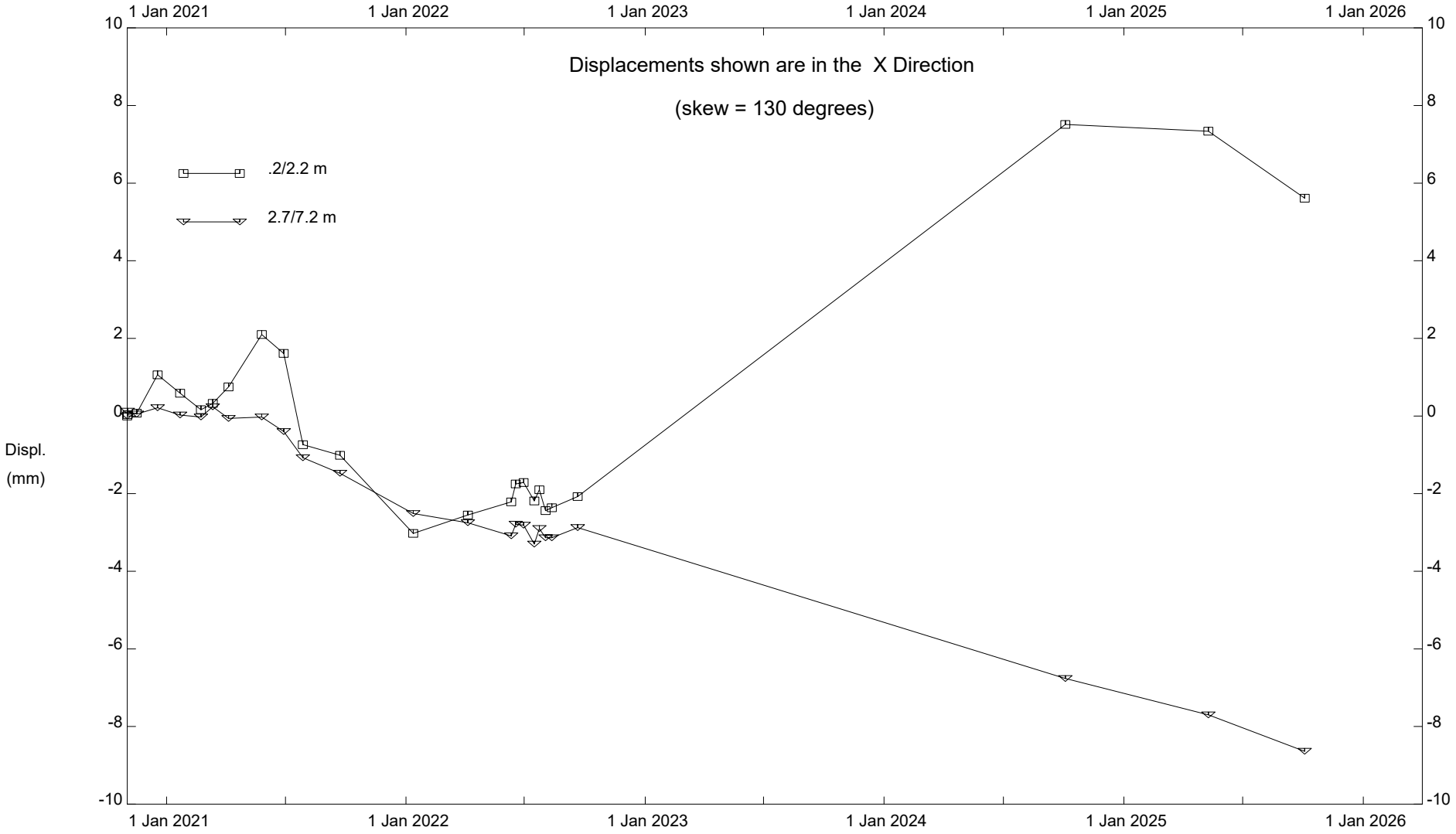
Wedgewood AHD, Inclinometer SI20-02

Stantec Consulting Ltd - Edmonton



Wedgewood AHD, Inclinometer SI20-02

Stantec Consulting Ltd - Edmonton



Wedgewood AHD, Inclinometer SI20-02