



**re: Groundwater Monitoring Summary
Proposed Residential Development
560 Hazeldean Road – Ottawa**

to: Regional Group – Stefanie Kaminski – skaminski@regionalgroup.com

date: May 26, 2026

file: PH5178-MEMO.01

Further to your request and authorization, Paterson Group (Paterson) is conducting an on-going groundwater monitoring program in support of the proposed residential development located at the aforementioned site.

1.0 Background Information

Field investigations were carried out by Paterson between May 2018 and May 2025 at the subject site. During that time, a total of seventeen (17) boreholes were extended to a maximum depth of 12.7 m below ground surface (bgs). At that time, select boreholes were equipped with monitoring well installations, including BH 2B-25, BH 3-25, BH 6-20, and BH 7-20, which have been utilized for the current groundwater monitoring program. It is understood the monitoring wells were distributed in a manner to provide general coverage of the proposed development, taking into consideration underground utilities and site features.

Field Survey

The monitoring well locations, and ground surface elevations at each monitoring well location, were surveyed by Paterson using a handheld GPS unit and referenced to a geodetic datum. The location and ground surface elevation at each monitoring well location is presented on Drawing PG7472-1 – Test Hole Location Plan attached to the current memorandum.

Subsurface Profile

The subsurface profile at the monitoring well locations included in the current groundwater monitoring program generally consisted of topsoil or asphaltic concrete followed by fill material and/or a stiff to firm brown clayey silt. The above noted layers are underlain by a firm to stiff grey silty clay to clayey silt. Details of the subsurface profile at the monitoring wells included in current groundwater monitoring program can be found in the Soil Profile and Test Data Sheets attached to the current report.





Monitoring Well Installation

Typical monitoring well construction details are described below:

- ❑ 1.5 to 3 m of slotted 51 mm diameter PVC screen at the base of the aforementioned monitoring wells.
- ❑ 51 mm diameter PVC riser pipe from the top of the screen to ground surface.
- ❑ Bentonite hole plug placed above PVC slotted screen extending to the existing ground surface.
- ❑ The 51 mm diameter PVC riser extended to ground surface and either capped with a flush mount cover, or extended above the ground surface and covered with a protective steel monitoring well casing.

Specific details of the installation of each monitoring well are further included in the well records attached to the current report.

2.0 Groundwater Monitoring Program

On November 29, 2025, BH 2B-25, BH 3-25, BH 6-20, and BH 7-20 was equipped with a Van Essen Instrument Mini-Diver Water Level Logger to accurately monitor fluctuations in the groundwater levels. In addition, a Van Essen Instruments Baro-Diver was installed in BH 6-20 to monitor changes in atmospheric pressure. The Mini-Divers were programmed to continuously measure and record groundwater levels throughout the subject site at a rate of 1 reading every 24 hours.

The results of the groundwater fluctuations and correlated precipitation events for each monitoring well location between November 29, 2025, and May 21, 2026, have been summarized in Figure 1 through Figure 4 attached to the current report.

3.0 Groundwater Monitoring Results

The data presented in Figure 1 through Figure 4 illustrate the collected groundwater elevations between November 29, 2025, and May 21, 2026. The groundwater readings measured within the monitoring wells across the subject site varied from a minimum elevation of 93.64 m asl to a maximum average elevation of 96.18 m asl. The low and high groundwater elevation measurements at each monitoring well location are summarized in Table 1 below.



Based on our analysis of the datalogger readings, seasonal groundwater fluctuations can be observed at each monitoring well location with a difference in elevation between the low and high readings ranging from 0.92 to 1.94 m. The low groundwater level across the site was noted to be at an average elevation of 94.08 m asl throughout the monitoring period. The high groundwater table across the site during this monitoring period was found to be at an average elevation of 95.34 m asl.

Table 1: Groundwater Monitoring Summary				
Well ID	Ground Surface Elevation (m asl)	Low Groundwater Elevation (m asl)	High Groundwater Elevation (m asl)	Difference in Groundwater Elevation (m asl)
BH 2B-25	95.02	93.64	94.80	1.16
BH 3-25	95.40	94.22	95.24	1.02
BH 6-20	95.95	94.24	95.16	0.92
BH 7-20	96.00	94.24	96.18	1.94
Average		94.08	95.34	1.26

We trust that this information satisfies your requirements.

Best Regards,

Paterson Group Inc.




Nicholas Zulinski, P.Ge., géo.

Attachments

- Figure 1 through Figure 4 – Groundwater Monitoring Levels
- Soil Profile and Test Data Sheets
- Drawing PG7472-1 – Test Hole Location Plan



Figure 1: BH2B-25 - Monitoring Well Water Elevations

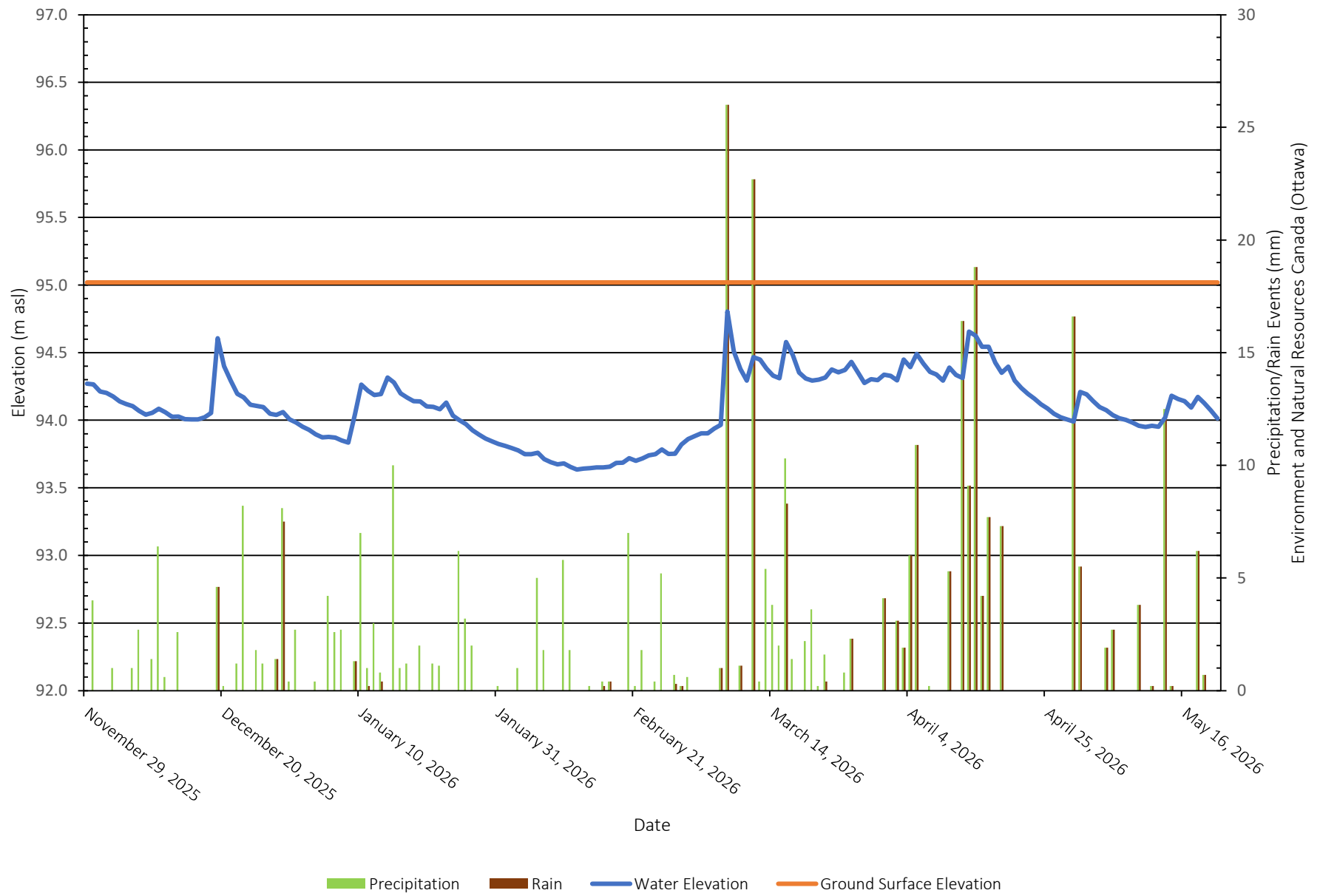


Figure 2: BH3-25 - Monitoring Well Water Elevations

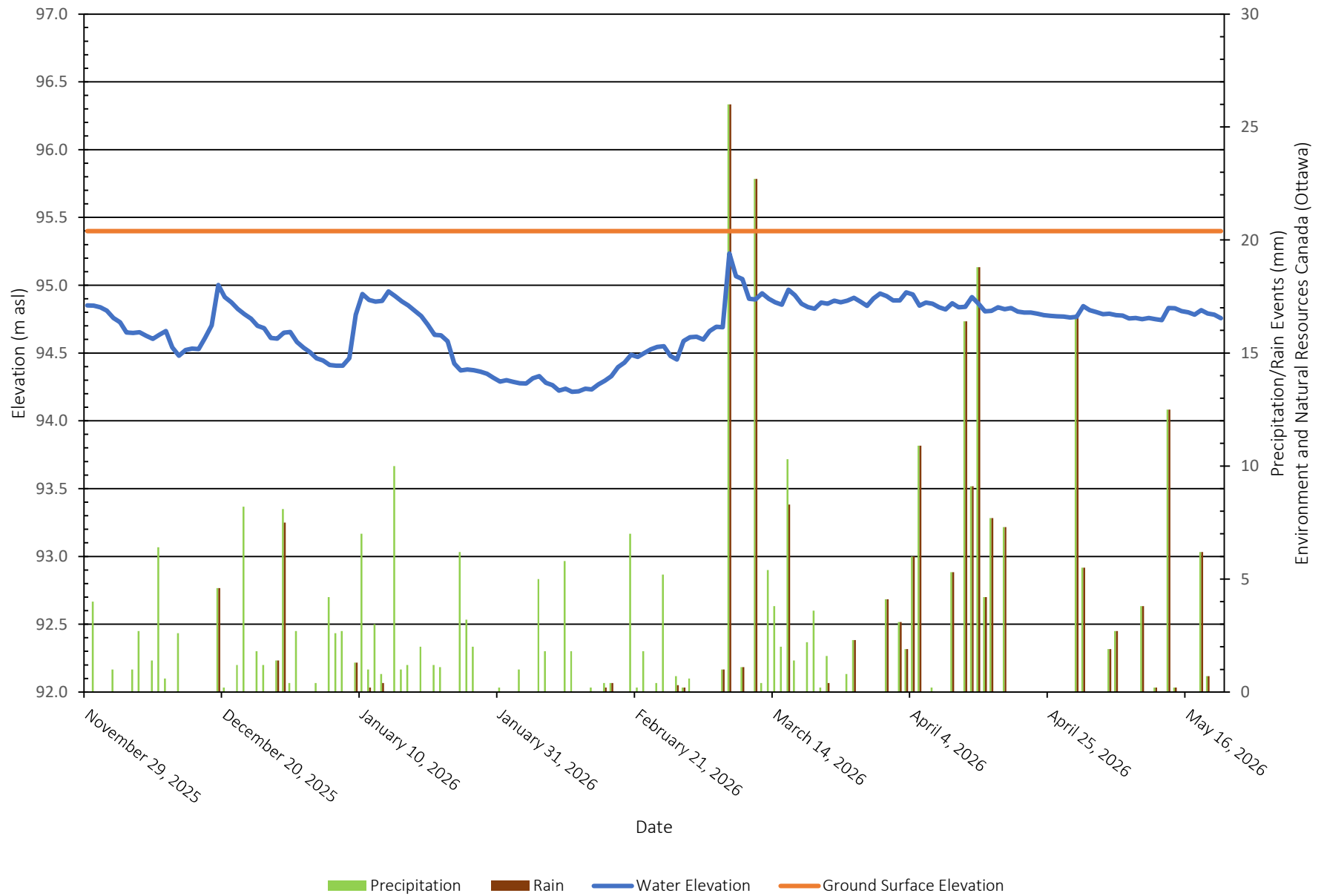


Figure 3: BH6-20 - Monitoring Well Water Elevations

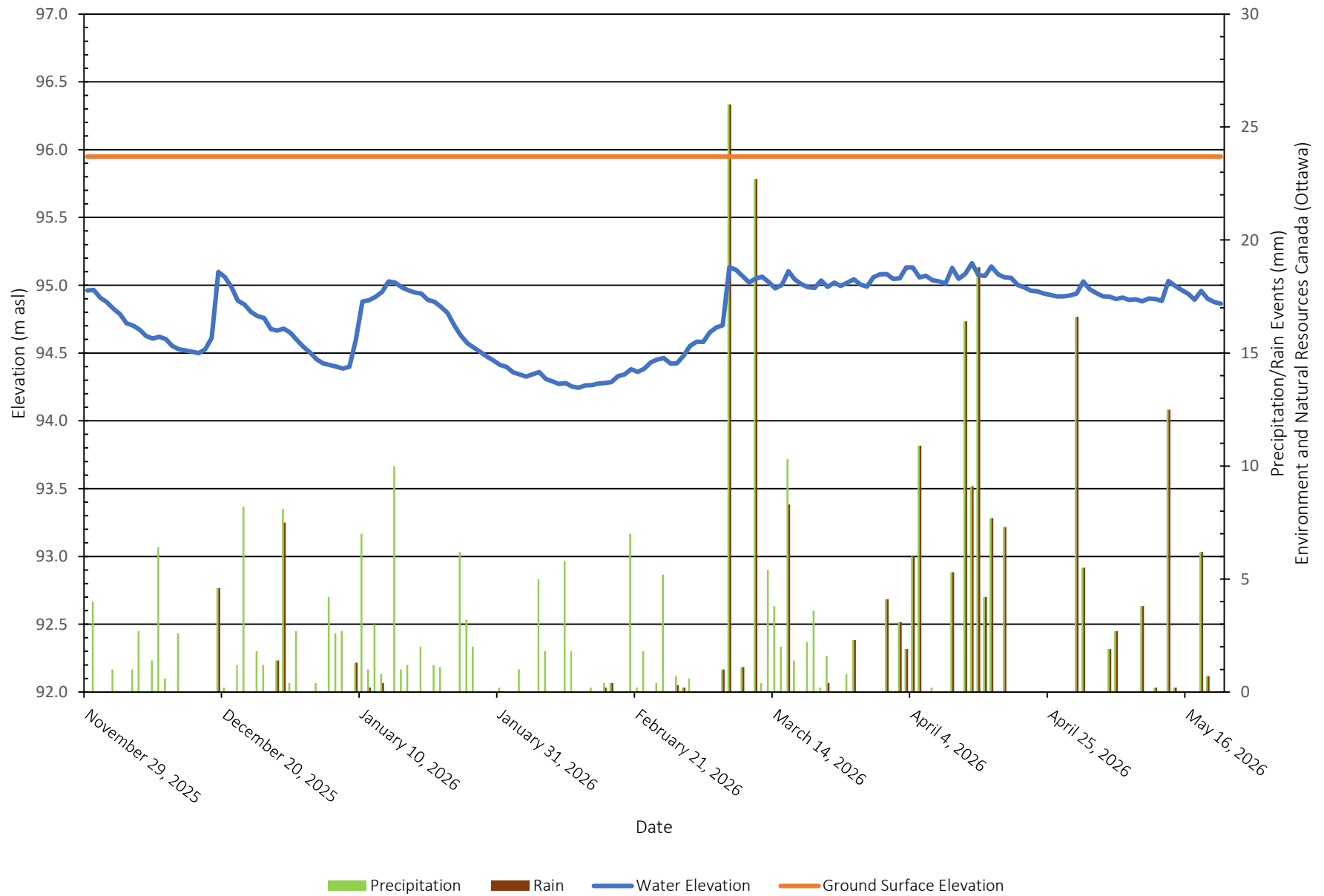
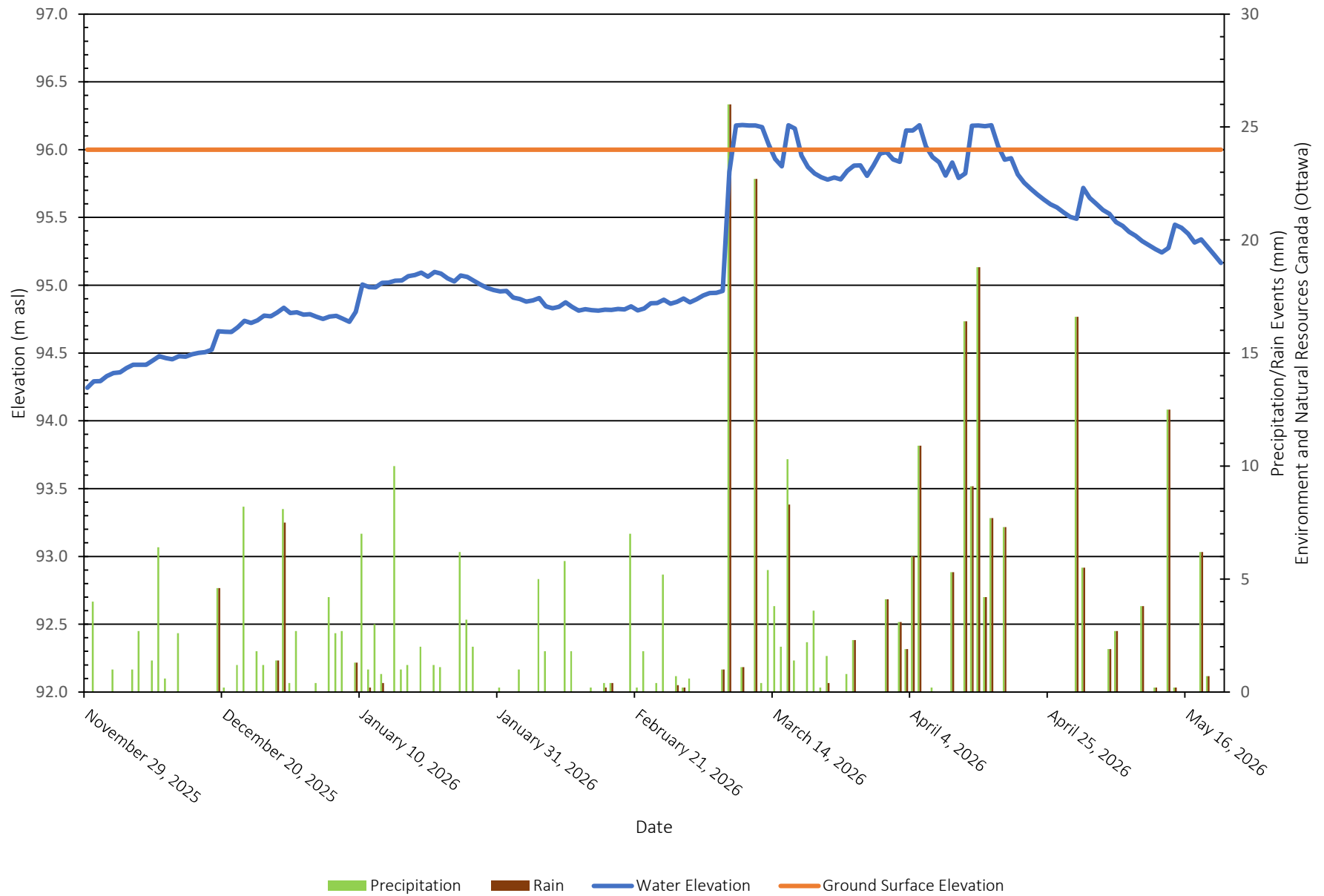


Figure 4: BH7-20 - Monitoring Well Water Elevations

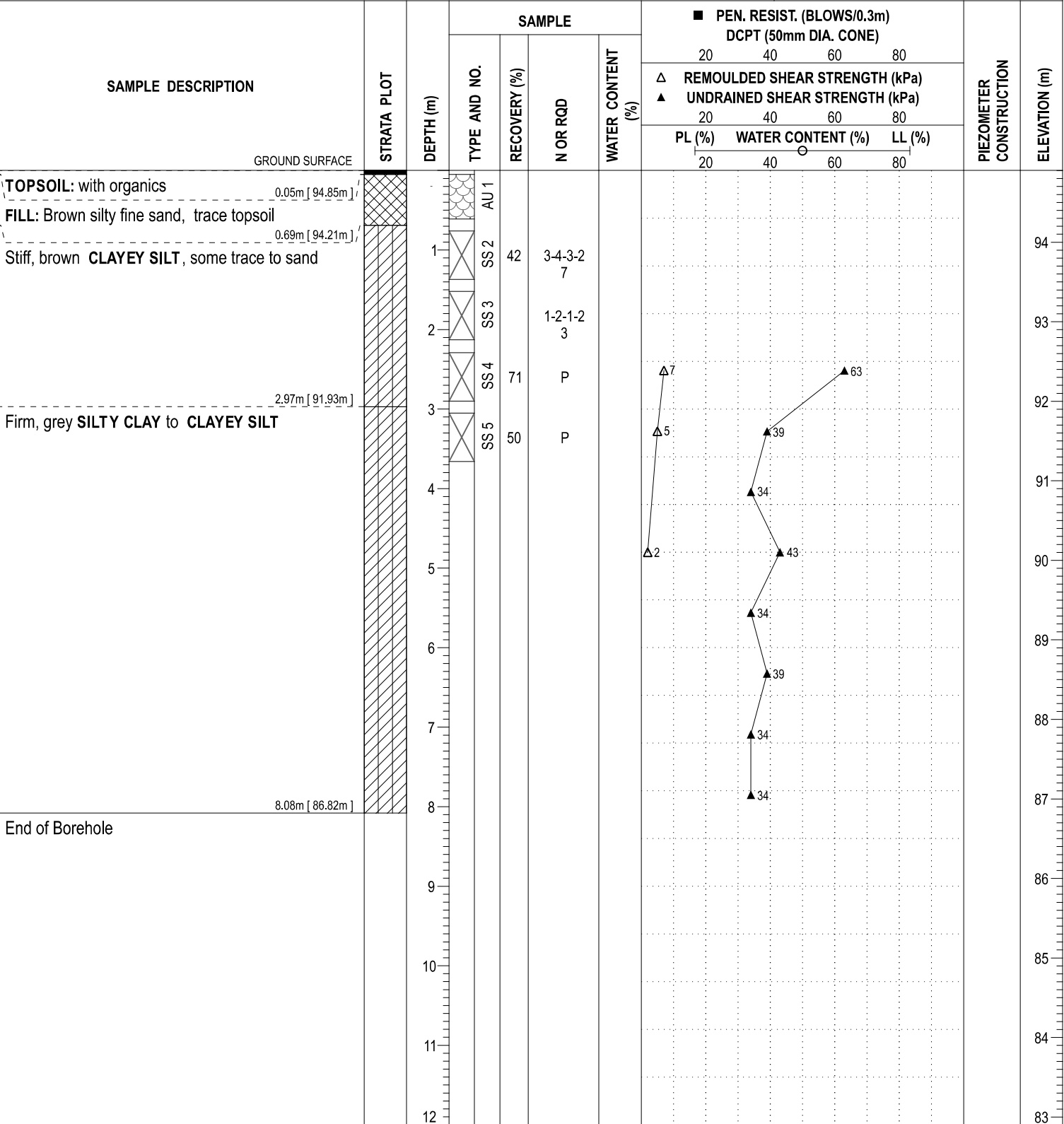


COORD. SYS.: MTM ZONE 9 EASTING: 351864.41 NORTHING: 5016805.75 ELEVATION: 94.90

PROJECT: FILE NO.: **PG7472**

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS: DATE: May 29, 2025 HOLE NO.: **BH 2-25**



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COORD. SYS.: MTM ZONE 9 EASTING: 351863.47 NORTHING: 5016805.63 ELEVATION: 95.02

PROJECT: **ADVANCED BY: CME-55 Low Clearance Drill** FILE NO.: **PG7472**
 REMARKS: DATE: **May 29, 2025** HOLE NO.: **BH 2B-25**

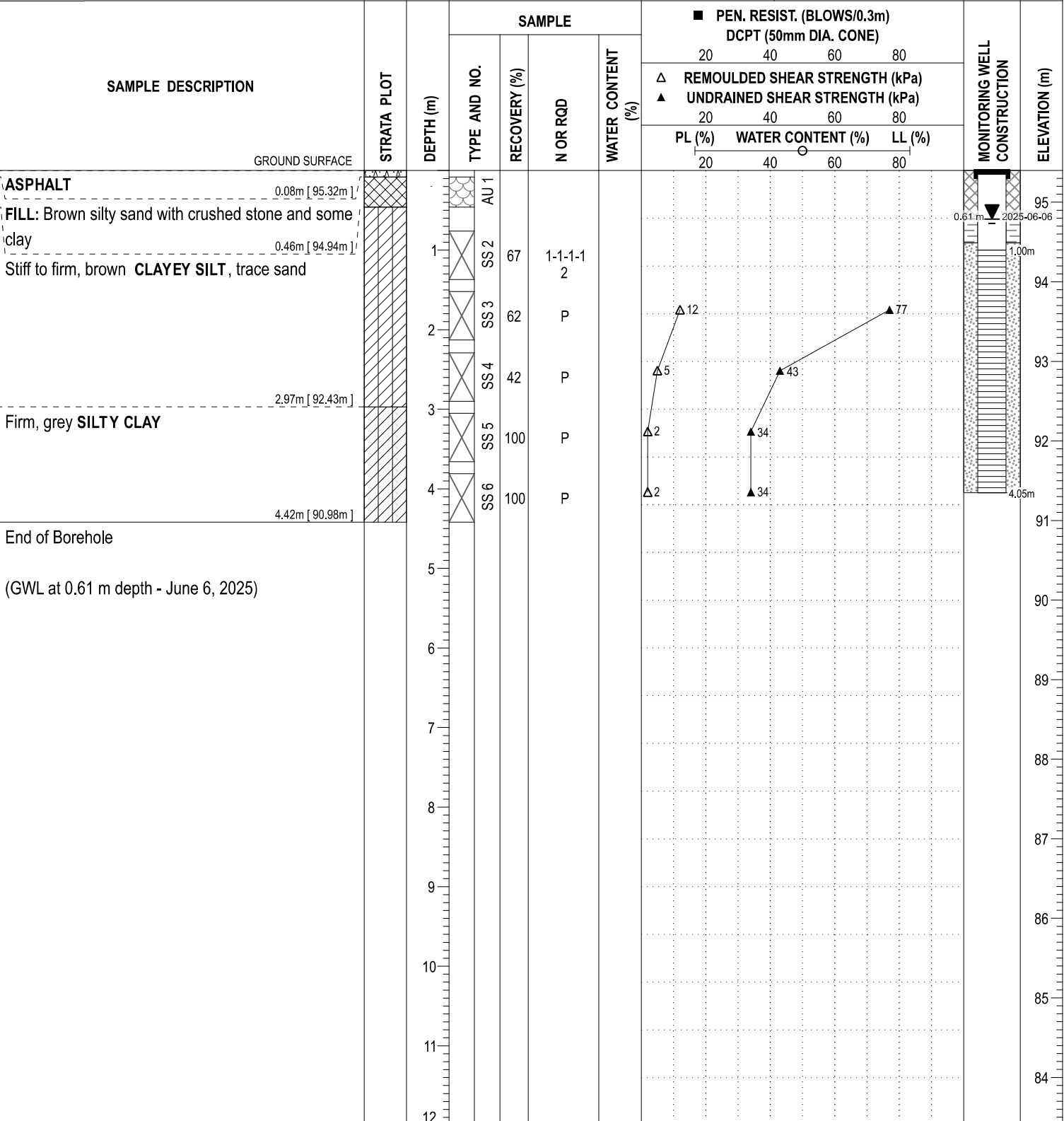
SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE				PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE)			MONITORING WELL CONSTRUCTION	ELEVATION (m)	
			TYPE AND NO.	RECOVERY (%)	N OR RQD	WATER CONTENT (%)	20	40	60			80
							△	▲	○			
			PL (%)	WATER CONTENT (%)	LL (%)							
GROUND SURFACE												
OVERBURDEN		0 to 4.57								95 to 90.45		
End of Borehole (GWL at 0.97 m depth - June 6, 2025)		4.57 to 12								90.45 to 84		

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COORD. SYS.: MTM ZONE 9 EASTING: 351805.60 NORTHING: 5016758.90 ELEVATION: 95.40

PROJECT: FILE NO.: **PG7472**
 ADVANCED BY: CME-55 Low Clearance Drill

REMARKS: DATE: May 29, 2025 HOLE NO.: **BH 3-25**



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DATUM Geodetic

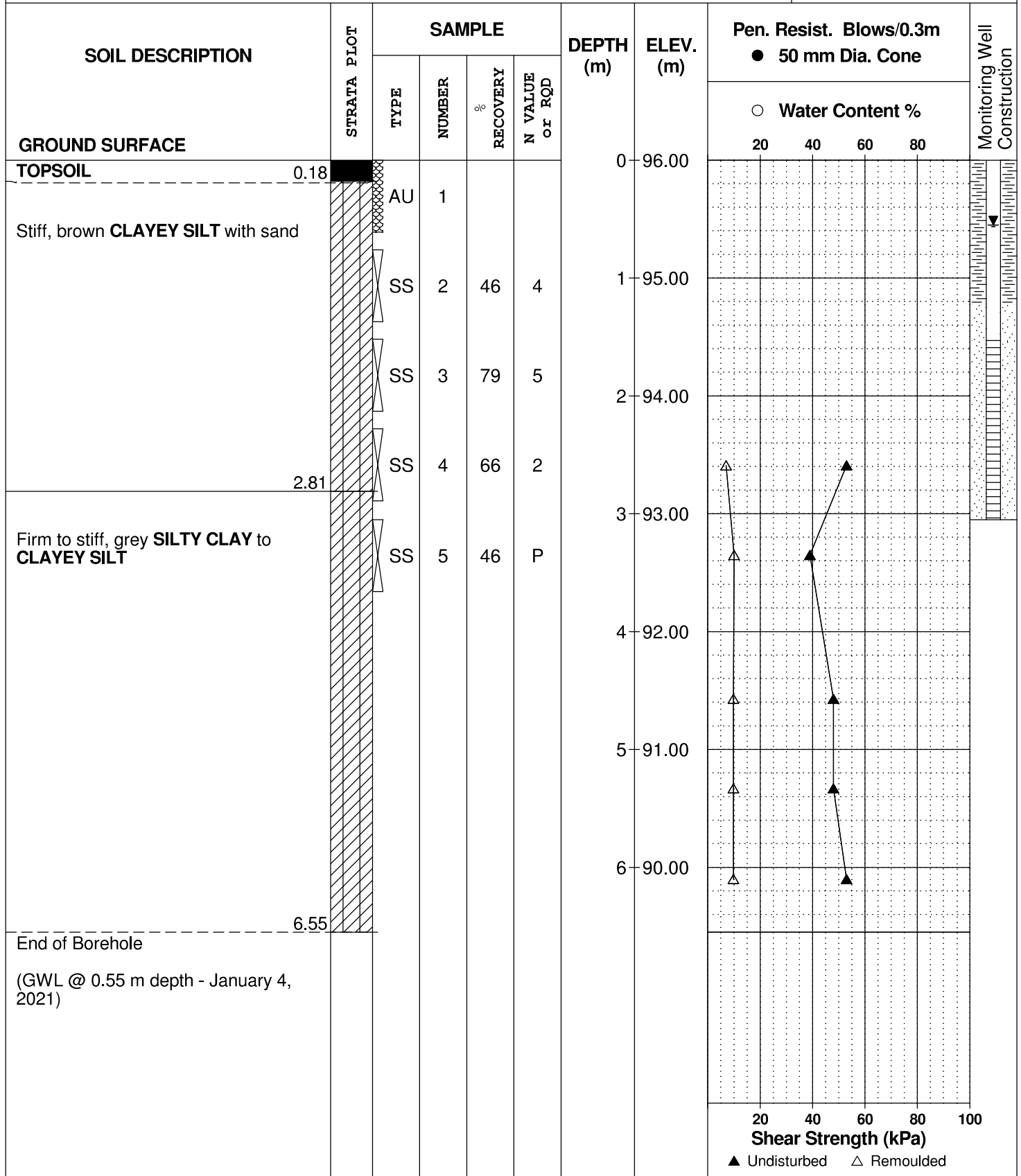
REMARKS

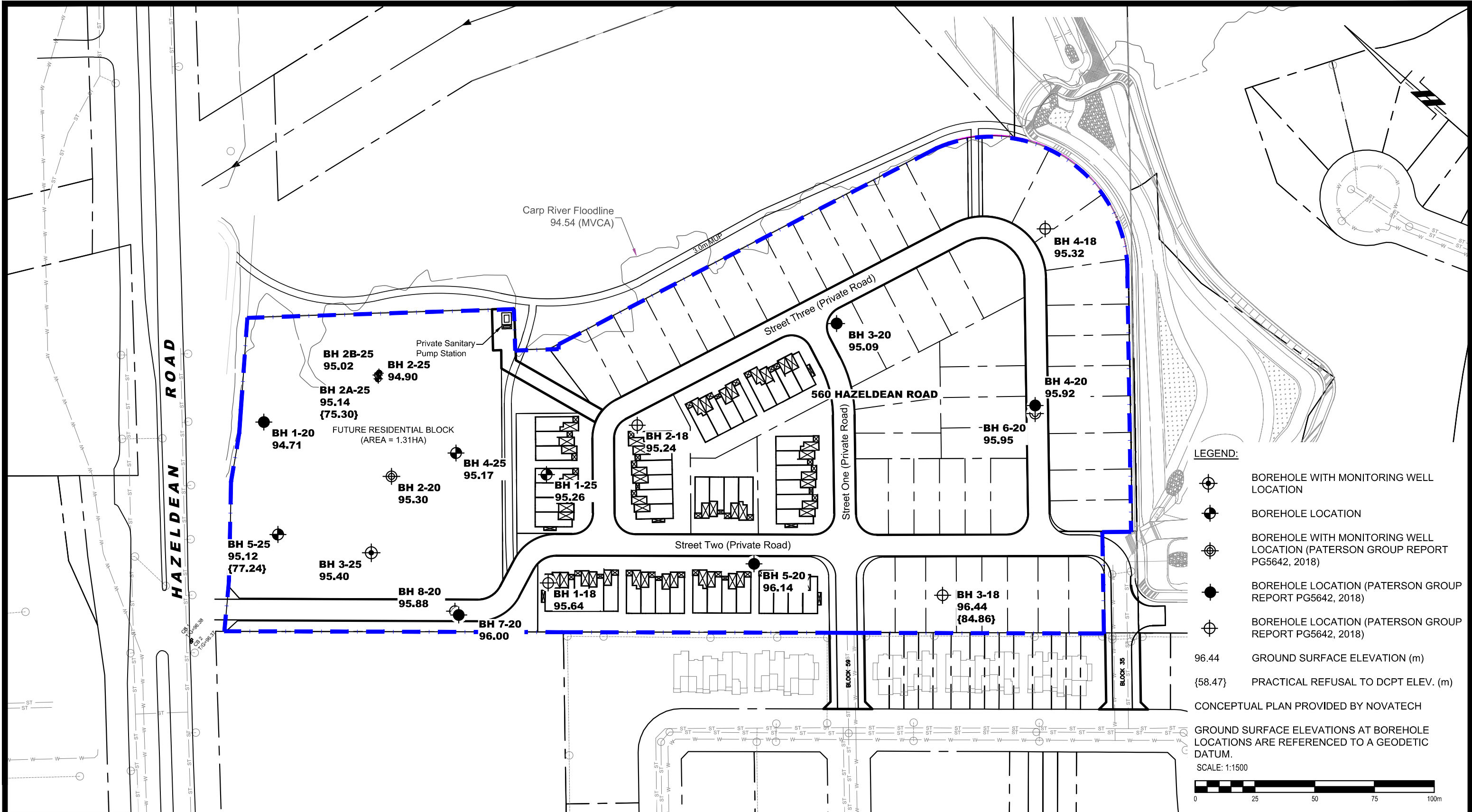
BORINGS BY CME-55 Low Clearance Drill

DATE 2020 December 21

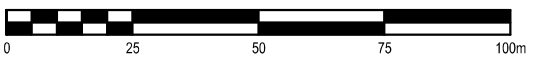
FILE NO. **PG5642**

HOLE NO. **BH 7 - 20**





- LEGEND:**
- BOREHOLE WITH MONITORING WELL LOCATION
 - BOREHOLE LOCATION
 - BOREHOLE WITH MONITORING WELL LOCATION (PATERSON GROUP REPORT PG5642, 2018)
 - BOREHOLE LOCATION (PATERSON GROUP REPORT PG5642, 2018)
 - BOREHOLE LOCATION (PATERSON GROUP REPORT PG5642, 2018)
 - 96.44 GROUND SURFACE ELEVATION (m)
 - {58.47} PRACTICAL REFUSAL TO DCPT ELEV. (m)
- CONCEPTUAL PLAN PROVIDED BY NOVATECH
- GROUND SURFACE ELEVATIONS AT BOREHOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM.
- SCALE: 1:1500



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NO.	REVISIONS	DATE	INITIAL
1	ADDED 2025 BOREHOLE LOCATION BH 1-25 TO BH 5-25 AND UPDATED CONCEPTUAL PLAN	11/06/2025	DR

**REGIONAL GROUP
GEOTECHNICAL INVESTIGATION
PROPOSED RESIDENTIAL DEVELOPMENT
560 HAZELDEAN ROAD**

OTTAWA, ONTARIO

TEST HOLE LOCATION PLAN

Scale:	1:1500	Date:	04/2025
Drawn by:	GK	Report No.:	PG7472-1
Checked by:	DR	Dwg. No.:	PG7472-1
Approved by:	SD	Revision No.:	1