COPPER NORTH
MINING CORP.

2017 ANNUAL QUARTZ MINING LICENCE REPORT

Submitted to Yukon Government, Energy Mines and Resources

Yukon Quartz Mining Licence QML-0007

March 2018

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Carmacks Copper Project, Yukon Territory

Submitted by:

Copper North Mining Corp.

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Executive Summary

Activities at the mine site during the period 1 January 2017 to 31 December 2017 consisted of:

- the Annual Engineer's Inspection;
- installation of 6 groundwater wells in the area of the planned dry stack TMA to allow extension of the site hydrogeology model to this
- an exploration program involving:
    - ground-based magnetometer geophysical survey;
    - trenching; and,
    - diamond drilling.

Exploration activities were conducted in accordance with Class 3 Quartz Mining Land Use Approval No. LQ00427.

Copies of the 2017 Annual Engineer's Inspection Report and the 2017 Report of Activities for the property are appended to this report. No development activities were undertaken in 2017.

Closure and reclamation security in the amount of $80,300 has been posted with Yukon against the liability incurred as a result of exploration activities.

This report has been formatted to respond to the specific requirements in the QML even though there may be no corresponding project undertakings.

Table of Contents

List of Figures

List of Tables

List of Appendices

1.0 INTRODUCTION

This Annual Report has been prepared by Copper North Mining Corp. and covers the period from January 1, 2017 to December 31, 2017 as required by Clauses 16.5 and 16.6 of Quartz Mining License (QML) QML-0007. As of January 19, 2012, the assignment of QML-007 was authorized from Carmacks Copper Limited to Carmacks Mining Corp., a wholly-owned subsidiary of Copper North Mining Corp.

This report provides a summary of activities at the Carmacks Copper Property for the reporting year, including, but not limited to, physical stability inspection and exploration.

Few site activities occurred that would normally form a part of this report in future years, once major project permitting is completed. Additional sections and information will be added to the annual reports as necessary to accommodate expanded reporting requirements from future mine development and related plans. The preliminary mine layout (not yet constructed) for the copper heap leach project is illustrated in Figure 1.

The reader should note that, since QML-0007 was issued, Copper North has been working to re-engineer the metallurgical process for the project to recover gold and silver in addition to copper. The results of the re-engineering work to date are detailed in a Preliminary Economic Assessment (PEA) completed in October 2016 (JDS 2016), a copy of which was provided with the 2016 Annual Report and represents the general plan for future development of the deposit, subject to regulatory approvals and financing. Nevertheless, QML-0007 applies to the project as planned at the time of issue and therefore dictates the context for this annual report.

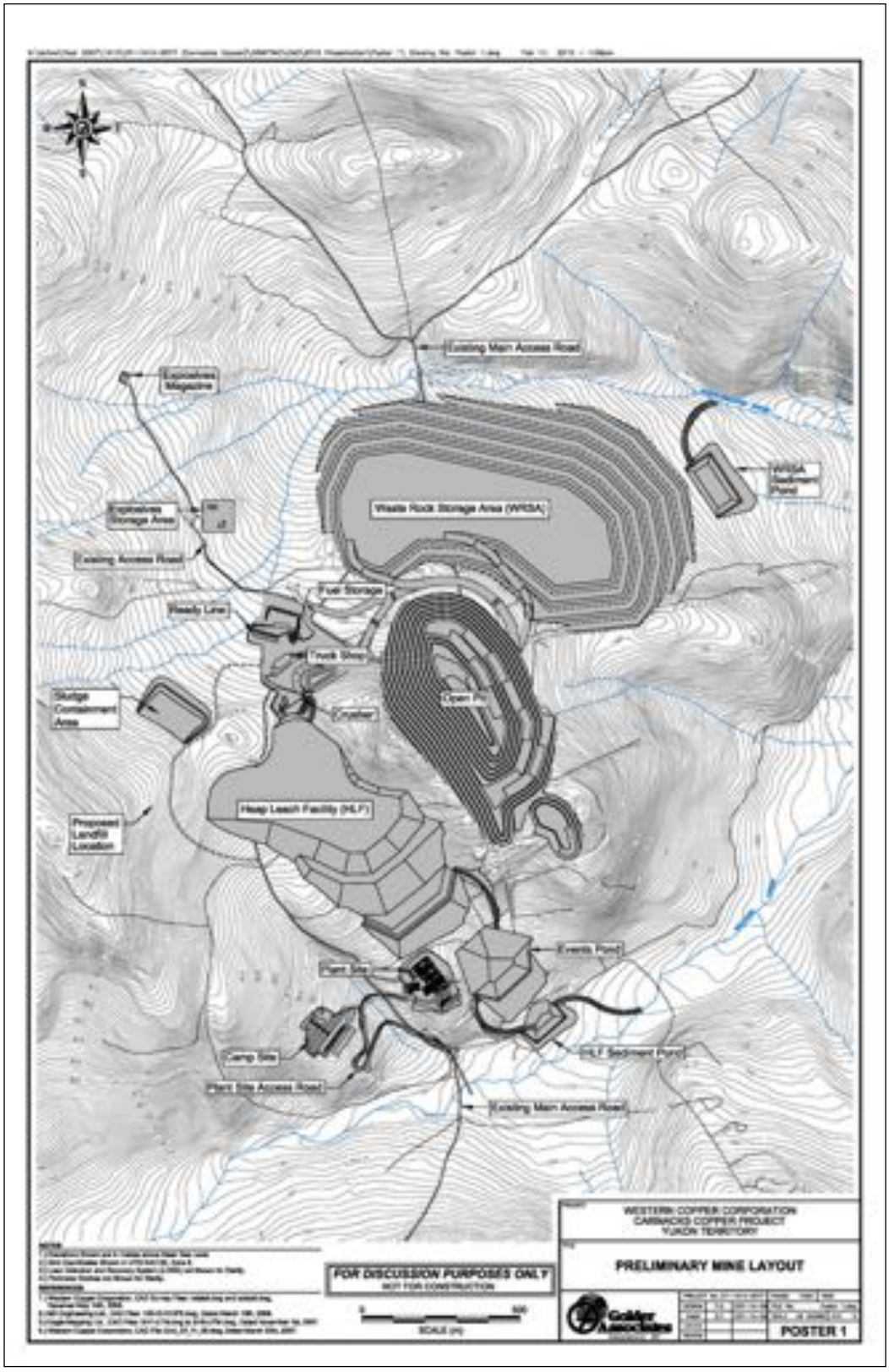


Figure 1. Preliminary Mine Layout (not yet constructed).

2.0 SITE ACTIVITIES

2.1 EXPLORATION

Exploration was conducted in September and October 2017 consisting of ground geophysics, diamond drilling, and trenching. Approximately 469 hectares (total of 94.56 line-km) of ground magnetic survey coverage were completed over three separate grid areas. The ground magnetic survey was accomplished without the use of cut lines. Forty-two diamond drill holes were completed in 2017 (36 mineral exploration holes, 6 groundwater monitoring wells), for a total of 4,511 meters (Table 1). A single trench was completed for a total of 40 m^3 excavated (Table 2). Additional details regarding the exploration program may be found in the attached 2017 Annual Report of Exploration Activities (Appendix B). The KING (13 claims) and KING F (5 claims) were staked to the east of the main deposit area, on the west side of the Yukon River, for a total of 18 new claims added to the claim block.

2.2 CONSTRUCTION AND DEVELOPMENT

2.2.1 Overview of Activities by Quarter

No construction or development activities occurred on the property in 2017.

2.2.2 As-built Drawings

No as-built drawings were produced in 2017.

2.3 MINING ACTIVITIES

2.3.1 Overview of Activities by Quarter

No mining activities took place in 2017.

2.3.2 Production Schedule – Ore and Waste Removal

Not applicable for this reporting period; no mining activities took place in 2017.

2.3.3 Average Head Grades

Not applicable for this reporting period; no mining activities took place in 2017.

2.3.4 Open Pit Stability

Not applicable for this reporting period; no mining activities took place in 2017.

2.3.5 Heap Leach Cells – Status of Leaching (including layout drawing)

Not applicable for this reporting period; no mining activities took place in 2017.

2.3.6 Copper Production

Not applicable for this reporting period; no mining activities took place in 2017.

2.3.7 Spills

No spills occurred during the reporting period.

2.3.8 On-going Reclamation

All drill pads and the trench developed in 2017 were reclaimed as listed in Tables 1 and 2. Typical before and after trench reclamation is shown in Figures 2a and 2b.

2.3.9 Actions Undertaken in Response to Annual Engineer's Inspection

No response was necessary to the 2016 inspection report.

2.3.10 Access Road

The access road to the site has not been constructed.

Table 1. Carmacks Project – 2017 Drill Pad Locations, Size, and Reclamation Status

Drill Hole	Drill Pad	Easting	Northing	Claim No.	Length (m)	Width (m)	Pad Area (m^2)	Drill Hole Length (m)	Reclaimed?
Exploration Drill Holes									
CN17-01	**P17-01**	412599	6912510	W 38	23	14	322	151	Yes
CN17-02	**P17-02**	412565	6912569	W 38	22	16	352	149	Yes
CN17-03	**P17-03**	412794	6912587	W 38	20	27	540	154	Yes
CN17-04	**P17-04**	412648	6912298	W 44	20	24	480	111	Yes
CN17-05	**P17-05**	412748	6912259	W 44	22	17	374	101	Yes
CN17-06	*Drilled from P17-05*	412748	6912259	W 44	--	--	--	160	Yes
CN17-07	**P17-07**	412042	6916759	WAR 45	20	20	400	104	Yes
CN17-08	**P17-08**	411947	6916732	WAR 45	20	20	400	83	Yes
CN17-09	**P17-09**	412923	6915694	W 4	20	20	400	152	Yes
CN17-10	**P17-10**	413349	6914989	W 17	20	20	400	104	Yes
CN17-11	**P17-11**	413359	6915264	W 19	20	20	400	117	Yes
CN17-12	*Pad built 2015*	412285	6912850	BOY 24	--	--	--	145	Yes
CN17-13	*Drilled from P17-18*	412387	6912781	AC #2, W 38	--	--	--	121	Yes
CN17-14	**P17-14**	412515	6912623	W 38	26	14	364	100	Yes
CN17-15	*Drilled from P17-18*	412387	6912781	AC #2, W 38	--	--	--	128	Yes
CN17-16	**P17-16**	412459	6912692	W 38	38	24	912	223	Yes
CN17-17	*Drilled from P17-16*	412459	6912692	W 38	--	--	--	169	Yes
CN17-18	**P17-18**	412387	6912781	AC #2, W 38	32	20	640	126	Yes
CN17-19	**P17-19**	412986	6912339	W 45	25	12	300	174	Yes
CN17-20	**P17-20**	413003	6912300	W 45	29	16	464	145	Yes
CN17-21	**P17-21**	412371	6912803	AC #2, BOY 24	24	18	432	138	Yes
CN17-22	**P17-22**	413064	6912179	W 47	24	17	408	94	Yes
CN17-23	**P17-23**	413099	6912196	W 47	24	16	384	120	Yes

Table 1. Continued.

Drill Hole	Drill Pad	Easting	Northing	Claim No.	Length (m)	Width (m)	Pad Area (m^2)	Drill Hole Length (m)	Reclaimed?
CN17-24	**P17-24**	412345	6912827	W 37, BOY 24	22	18	396	152	Yes
CN17-25	**P17-25**	413080	6912223	W 47, W 45	15	24	360	117	Yes
CN17-26	**P17-26**	413062	6912248	W 45	13	24	312	135	Yes
CN17-27	**P17-27**	412308	6912833	BOY 24	20	24	480	102	Yes
CN17-28	**P17-28**	413074	6912156	W 47	22	18	396	82	Yes
CN17-29	**P17-29**	413094	6912128	W 47	21	17	357	81	Yes
CN17-30	**P17-30**	413038	6912169	W 47	18	24	432	53	Yes
CN17-31	**P17-31**	413113	6912160	W 47	22	18	396	119	Yes
CN17-32	**P17-32**	413045	6912142	W 47	17	20	340	53	Yes
CN17-33	**P17-33**	413060	6912114	W 47	18	20	360	50	Yes
CN17-34	**P17-34**	413059	6912017	W 46	20	18	360	52	Yes
CN17-35	**P17-35**	413051	6912044	W 46	20	16	320	47	Yes
CN17-36	Pad built 2015	413001	6912179	W 46				50	Yes
Groundwater Wells									
VW-01-17	**PVW17-01**	410851	6914063	W 10	20	20	400	52	Yes
VW-02-17	**PVW17-02**	411276	6914492	W 8, WAR 36, W 6	20	20	400	47	Yes
VW-03-17	**PVW17-03**	411427	6914197	W 6	20	20	400	81	Yes
VW-04-17	**PVW17-04**	411890	6914396	W 11	20	20	400	49	Yes
VW-05-17	**PVW17-05**	412595	6914594	W 15	20	20	400	75	Yes
VW-06-17A	**PVW17-06**	411831	6914737	GAP 1	20	20	400	43	Yes
					Totals		**14,881**	**4,511**	

Table 2. Carmacks Project – 2017 Trench Location, Dimensions, and Reclamation Status.

Trench	Start		End		Location	Title	Average Dimension (m)			Volume (m^3)	Surface Area (m^2)	Reclaimed?
	Easting	Northing	Easting	Northing			Length	Depth	Width			
T2017A	413340	6914982	413325	6914969	W 17	Claim	20	2	1	40	40	Yes

Figure 2. Typical trench conditions before (a. Trench TR-15-32A) and after (b. Trench TR16-26) reclamation.

2.4 RESOURCES AND RESERVES

The current resource estimate for the property (Table 3) is as stated in the October 2016 Preliminary Economic Assessment (PEA) (JDS 2016). This PEA supersedes the January 2016 Independent Technical Report (ACS 2016). No reserve is currently stated for the property. The resource estimate will be updated shortly with the results of the 2017 exploration program.

Table 3. Carmacks Project Mineral Resource Statement, October 12, 2016.

Mineralised Zone	Resource Class	Tonnes (000)	Total Cu (%)	Soluble Cu (%)	Au (g/t)	Ag (g/t)	Sulphide Cu (%)
Oxide and Transition mineralisation	Measured	6,484	0.86	0.69	0.41	4.24	0.17
	Indicated	9,206	0.97	0.77	0.36	3.80	0.20
	Measured + Indicated	15,690	0.94	0.74	0.38	3.97	0.20
	Inferred	913	0.45	0.30	0.12	1.90	0.15
Sulphide mineralisation	Measured	1,381	0.64	0.05	0.19	2.17	0.59
	Indicated	6,687	0.69	0.04	0.17	2.34	0.65
	Measured + Indicated	8,068	0.68	0.05	0.18	2.33	0.65
	Inferred	8,407	0.63	0.03	0.15	1.99	0.61

2.5 CARE AND MAINTENANCE

No activities to report.

2.6 PROPOSED DEVELOPMENT AND PRODUCTION FOR UPCOMING YEAR

There are presently no development or production plans for the 2018 year.

3.0 MONITORING PROGRAMS AND STUDIES

The QML contains several requirements for studies and monitoring programs. The following sections outline work done with respect to these studies and programs.

3.1 ON-GOING METALLURGICAL STUDIES

3.1.1 Field Tests

No metallurgical field tests were in progress as of 2017.

3.1.2 Laboratory Tests

No metallurgical laboratory tests were conducted in 2017.

3.2 HEAP LEACH PAD LINER PERFORMANCE MONITORING

No liner has been placed and no performance monitoring is in progress.

3.3 WATER QUALITY SURVEILLANCE PROGRAM

No water quality surveillance was conducted in 2017.

The locations established to date for the monitoring of surface water quality are in Table 4 and Figure 3. Additional locations will be added as the mine is brought into production.

Table 4. Water Quality Surveillance Program Site Descriptions and Locations.

Station	Description	Northing	Easting
W2	Williams Creek Upstream of North Williams Creek Confluence	6914145	413499
W3	Lower North Williams Creek Upstream of Confluence with Williams Creek	6914379	413640
W4	Williams Creek Downstream of Confluence with North Williams Creek	6914653	413888
W5	South East Tributary to Williams Creek	6912947	412978
W6	Williams Creek Downstream of South East Tributary	6913373	413042
W7	Upper North Williams Creek Tributary Upstream of Road Crossing	6914810	411778
W9	Williams Creek Upstream of Access Road Crossing	6912511	411907
W10	Williams Creek Upstream of Yukon River	6919033	416606
W11	Nancy Lee Creek (Tributary of Williams Creek)	6918096	415803
W12	Williams Creek Downstream of Confluence with Nancy Lee Creek	6918000	416102
W13	Williams Creek Upstream of Confluence with Nancy Lee Creek	6917984	415912
Y1	Yukon River Upstream of Williams Creek	6918974	416752
Y2	Yukon River Downstream of Williams Creek	6919308	416249

Notes: Coordinates are UTM Zone 8 NAD83

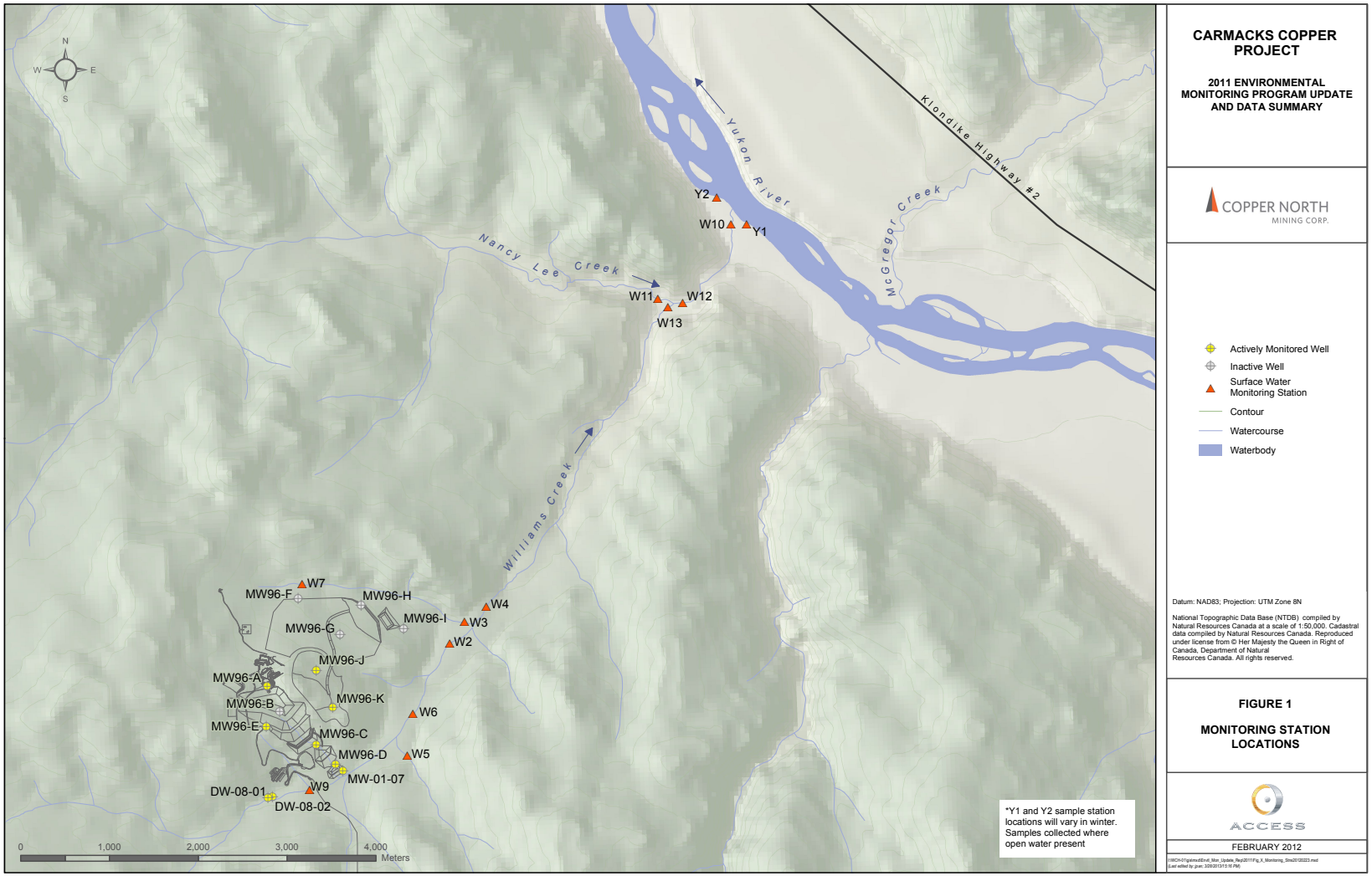


Figure 3. Water Quality Monitoring Station Locations.

3.3.1 Surface Water Quality

No surface water quality sampling was required or conducted in 2017.

3.3.2 Groundwater Quality

No groundwater quality monitoring was required in 2016.

3.4 HYDROGEOLOGY STUDIES

Six (6) groundwater wells were installed by Golder Associates Ltd. in the area of planned dry stack tailings management area (described in JDS 2016) to enable pumping tests and monitoring of piezometric elevation. Further details regarding the well installations and findings are pending completion of the field report.

3.5 WATER TREATMENT AND MANAGEMENT

No water treatment studies or water management studies were required or conducted in 2017.

3.6 CLIMATE DATA AND SNOW SURVEY MONITORING PROGRAM

Copper North did not conduct any meteorological monitoring on site in 2017.

3.7 GEOCHEMICAL STUDIES AND ACID-BASE ACCOUNTING

Tailings residue from locked cycle metallurgical tests conducted in 2015 have been submitted for geochemical analysis and humidity cell testing. The lab work has been completed and the geochemical test report is pending.

3.8 PHYSICAL MONITORING PROGRAM

Physical monitoring of structures and facilities in 2017 was limited to the Annual Engineer's Inspection (Appendix A).

3.9 ENGINEER'S ANNUAL PHYSICAL INSPECTION REPORTS

Copper North Mining Corp. engaged Golder Associates Ltd. to perform the Annual Physical Inspection of the site required under Sections 16.1 and 16.2 of the QML. The inspection was carried out on September 28, 2017. The complete report is contained in Appendix A and a copy of this report was previously submitted to Government of Yukon, Department of Energy, Mines and Resources, Mineral Resources Branch.

The report focused on inspection of existing site conditions and of the limited infrastructure on site, since no development has yet taken place on site. No areas were identified as requiring immediate attention. Items requiring repair included the geomembrane liner of the full storage berm, which had been damaged by a bear, and the road near the North Williams Creek crossing, which had been disturbed by heavy vehicle traffic in wet weather. These items will be addressed in the 2018 field season. Recommendations were limited to identifying areas of minor

maintenance to be addressed, as required, in relation to road maintenance to prevent erosion and washouts and ongoing minor maintenance of silt fences and sediment traps.

3.10 RECLAMATION AND REVEGETATION STUDIES

In 2007, a test patch of seeding was completed on an approximately 500 m x 12 m area located adjacent to the west side the access road and south of the Williams Creek crossing and the helicopter pad area. The seeding and resulting vegetation was intended to help stabilize sediments in this area and has been observed in the past six years to be performing well.

3.11 SUBMISSION AND APPROVAL OF PLANS

No development plans were submitted during 2017.

4.0 OUTSTANDING FINANCIAL LIABILITY

4.1 HEAP LEACH

There has been no update to the assessment of the liability associated with the Heap Leach Facility, which was presented in the May 2009 revision of the Preliminary Detailed Closure and Reclamation Plan.

4.2 WASTE ROCK STORAGE

There has also been no update to the assessment of the liability associated with the Waste Rock Storage Facility, which was presented in the May 2009 revision of the Preliminary Detailed Closure and Reclamation Plan.

4.3 OVERALL LIABILITY

The estimated maximum overall liability associated with the development and operation of the mine remains as set out in the May 2009 revision of the Preliminary Detailed Closure and Reclamation Plan is detailed in Table 5.

Table 5. Estimated closure liability for the planned heap leach project.

Facility or Area Description	Cost
Open Pit	$ 23,000
Heap Leach Facility	$ 17,295,000
HLF Events and Sediment Ponds	$ 296,000
Waste Rock Storage Area	$ 740,000
Plant and Ancillary Facilities	$ 467,000
Camp	$ 103,000
Truck Shop Service Complex	$ 70,000
Miscellaneous Facilities	$ 95,000
Access and Haul Roads	$ 248,000
Site Management	$ 1,103,000
Total	**$ 20,440,000**

An additional $2.675 million in addition to the above total has been estimated to cover costs associated with rinsing and neutralization of the heap leach facility, should the rinsing period extend to 9 years instead of the initially estimated 4.5-year period.

To date, security in the amount of $80,300 has been posted with Yukon Government. This represents the accrued liability due to exploration activities on the site.

4.4 ENGINEERING CONTINGENCIES

In accordance with Section 11.0 of the QML, Copper North Mining Corp. prepared a Contingency Plan based on a workshop held in October 2009. The plan was submitted to the Chief of Mining Land Use in January 2010. The main purpose of the Contingency Plan was to identify possible alternative approaches to decommissioning the Heap Leach Facility, however, other facilities were also examined. The plan identified several possible failure modes and contingency measures for each of the facilities and recommended further work that should be undertaken. The report was issued in draft format pending comments from government. No comment from government has been received to date. No further work has been undertaken to develop any of the contingency plans identified.

COPPER NORTH MINING CORP.

(On behalf of CARMACKS COPPER LTD.)

Doug Ramsey

Vice-President, Sustainability and Environmental Affairs

Appendix A. Annual Engineer's Inspection Report

October 27, 2017 Project No. 1786033_LT0001_Rev0

Mr. Doug Ramsey
Carmacks Mining Corp.
1120 - 1095 W. Pender St.
Vancouver, BC V6E 2M6

2017 ANNUAL INSPECTION OF THE CARMACKS COPPER PROJECT, CARMACKS, YUKON

Dear Doug,

1.0 INTRODUCTION

This letter summarises the outcomes of the 2017 annual inspection of the Carmacks Copper Project site. The inspection was carried out by Golder Associates Ltd. (Golder) for Carmacks Mining Corp. (Carmacks Mining) to fulfil the requirements of Section 16.1 of the Quartz Mining License (QML-0007) for the site. The work was carried out in accordance with Golder's proposal P1786033-002-Rev1, dated August 24, 2017, and approved by Carmacks Mining in an email dated August 25, 2017.

The purpose of the inspection was to evaluate the condition and stability of the existing facilities in the area of the proposed mine. At the time of inspection, a geotechnical test pit program, hydrogeological drilling, resource drilling, and access road grading were being actively undertaken at the project site. The existing facilities at the site comprise a mine exploration camp, which was near capacity at the time of the inspection, access roads, and minor drainage structures. Golder also inspected the area of proposed mine development. The proposed mine infrastructure, as described in the approved QML, dated April 15, 2009, includes a heap leach facility, water management ponds, an open pit, a waste rock storage area, a processing plant and related facilities, ore preparation facilities, ore stockpiles, and water diversion structures. A revised proposal for developing the site was presented by Carmacks Mining in a Preliminary Economic Assessment (PEA) Technical Report, dated October 12, 2016. The revised proposal would see removal of the heap leach facility and the development of a filtered tailings management area.

2.0 OBSERVATIONS

2.1 Overview

The inspection was carried out by Mr. Benjamin Cox of Golder, in the company of Mr. Doug Ramsey of Carmacks Mining on September 28, 2017. The inspection focused on the existing site infrastructure and a review of the general site conditions. Photographs of the site at the time of the inspection are presented in Attachment 1. Data collected from thermistors during the site visit are presented, with data from previous years, in Attachment 2.

At the time of the site visit, two drilling programs were in operation. A hydrogeological/geotechnical investigation was being carried out in the area of the proposed tailings management area and exploration drilling was occurring in the area of North Williams Creek.

The project is in the advanced exploration stage. The only infrastructure on site at the time of inspection was the exploration camp and access roads to the proposed open pit mine area and other areas of the property. The access roads were developed to provide access for exploration and investigation activities.

The site development required to support operations has not started yet. Therefore, there is no stability concern associated with the undeveloped facilities and no maintenance is required. No permanent water diversion structures are in place. There are, however, temporary water management structures (i.e., ditches and sediment catch basins) in place that are appropriate for the exploration stage of the property. We recommend that these diversion structures continue to be inspected annually and that ongoing maintenance be conducted, as deemed necessary.

2.2 Exploration Camp Area

In previous years, inspections of the camp area have noted the presence of cracking, most likely resulting from thaw induced settlement beneath and adjacent to core storage racks. During the current inspection, only one crack was observed in the vicinity of the core storage racks (Photograph 1). In general, the appearance of cracks in the core storage rack area was consistent with the 2016 inspection. There appears to have been some infilling of cracks observed during previous inspections. The area is also characterised by the regrowth of vegetation around the core racks and a general decrease in the magnitude of settlements occurring with time. As in previous years, settlement in this area does not represent a safety concern and the inspection did not indicate erosion of sediments from the pad area into the surrounding natural area. Two new core racks have been constructed in 2017 and one was under construction at the time of the inspection (Photograph 2).

The slope behind the camp (Photograph 3) is stable and does not pose a safety concern for the camp structures or current operations. There is minor ravelling of small sections of the slope, but these are not impacting camp safety nor would they represent a risk for workers on the project. Some regrowth of vegetation was observed in the camp area.

There are two heated buildings, the core shack (foreground) and geology office (background), located adjacent to the core storage racks (Photograph 4). The tanks, valves and hosing were in a satisfactory condition at the time of inspection. Liners have been placed beneath each tank to act as secondary containment for potential leaks and were in a satisfactory condition.

2.3 Proposed Heap Leach Facility Area

The inspection included the area of the previously proposed heap leach facility and associated water management pond. Site preparation in these areas has been limited to clearing of trees and topsoil. This portion of the site also includes several access roads and drilling platforms previously used for exploration and investigation activities.

Since the initial clearing in 1997 and 1998, regrowth of vegetation has been occurring in the area. Small coniferous trees, approximately 1 m in height, are established throughout this area (Photograph 5). Erosion and sediment control measures in this area were initially installed in September 2008 and further maintained in September 2009 and August 2010. The sediment control measures include ditches and berms to divert water into sediment catch basins, silt fences, and vegetated areas to break up flow and reduce the potential for erosion. There continues to be some minor erosion of sediments along the access roads, however, this appears to be attenuating as vegetation growth on the access roads increases (Photographs 6 and 7). Sediment basins and controls are functioning adequately in areas that have seen no new activity.

Clearing and drilling activities were carried out in 2015 and 2016 at a location down slope of the proposed heap leach facility, near the proposed water management pond (Photograph 8). Regrowth of vegetation, primarily volunteer species of grass, has mitigated loss of sediment from the former drill pads and is suitably rehabilitating.

Further downstream, within the floodplain of Williams Creek, silt fences have been installed and the area seeded where sediment from previous site erosion accumulated (Photographs 9 and 10). Grass seed was applied in 2009 to promote the re-establishment of vegetation and to further stabilize sediment. The approach was noted to be generally effective in 2011 and 2012, but with limited regrowth attributed to periodic pooling of water. The area was also re-vegetated with woody plants (willow cuttings), and these plants are now well established. Volunteer species of grass and woody plants are performing very well. There was no evidence of sediment movement, indicating that re-vegetation has been effective in minimizing erosion. Silt fencing surrounding these areas is now overgrown and there is no evidence of sediment movement through the area. Silt fences are typically a temporary measure and could be removed if no further disturbance is expected upstream.

2.4 Proposed Open Pit Mine Area

The area proposed for the open pit mine was inspected. The slopes of the trenches excavated as part of the effort to obtain bulk samples during exploration activities were observed to be in satisfactory condition. There was no observed slumping or failures of the trenches and the slopes facilitate egress for wildlife. Several of the closed drill pads were inspected and there did not appear to be any erosion noted from these areas that would require attention.

2.5 Proposed Waste Rock Storage Area

The proposed waste rock storage area was inspected. The waste rock storage area is tree covered and the drill pads and access roads in the area are re-vegetating by volunteer species to the extent that access on foot is now difficult (Photograph 11).

2.6 Fuel Storage Area

The fuel storage area was inspected. The fuel storage area comprises a bunded and lined basin constructed to contain any spilled fuel and currently a few dozen drums of diesel fuel. After several days of rain prior to the inspection, approximately 0.3 m of water had accumulated in the basin (Photograph 12). The bund is less than 3 m in height and the basin capacity is less than 10,000 m^3; therefore, the fuel storage area is appropriately permitted under the QML without need for a water license (Yukon Environment Dam Guide).

There was evidence that an animal had entered and exited the basin. The animal damaged the liner in a few locations (Photograph 13). The damage to the liner should be repaired. The fuel drums should be organized in a manner to allow wildlife egress from the basin.

2.7 Site Access Roads

The main access road to the north of the waste rock storage area was observed to be in good condition with only minor erosion observed. Minor erosion of the road shoulders was observed near at the culvert on North Williams Creek. The culvert has undergone some crushing and has accumulated some sediment (Photograph 14). However, the culvert remains more than adequate to accommodate the relatively minor flows at this location. The access road should be inspected annually and ongoing maintenance of drainage features and erosion should be anticipated. The combination of recent rain and high traffic due to current drilling activities have resulted in a rutted, muddy area at the low point in the road near North Williams Creek (Photographs 15 and 16). The road in this area should be regraded and gravel placed, as required to improve trafficability at this location.

The ford road crossing installed at Williams Creek in 2013 continues to function as intended (Photograph 17). The rockfill in the ford is well-graded and there is no indication of movement of finer materials. Ponded water was observed on the upstream side of the road, with flow across the road. It is possible that a large rainfall event could result in erosion. We therefore recommended that the ford continue to be inspected annually and maintenance be carried out, if required. The ford is appropriate for the current status of the project. However, prior to site development, it is recommended that the culvert at the Williams Creek crossing is replaced and the access road armored against erosion at this location.

The access road crossing at Merrice Creek includes a single-span bridge set on grade (Photograph 18). Following recommendations in the July 2014 inspection memorandum, the bridge was extended by approximately 3 m and seated 1 to 2 m on the abutments. Approximately 3 m of steel was welded to the existing span, bridge decking was replaced and extended, and the approaches were re-graded to the bridge deck elevation.

The bridge was observed to be in a satisfactory condition and is securely anchored at each of the abutments. The right (or southern) abutment is steep sided and there is evidence that erosion may be continuing to occur at this location under high-flow conditions. The bridge should be monitored annually and following large rainfall events. In the event that erosion begins to compromise the stability of the abutment, consideration should be given to the installation of erosion protection at this location.

3.0 THERMISTOR DATA

Ground temperatures derived from thermistor data collected during the site visit are presented in Attachment 2. Data from thermistors installed in 1995 and 1996 were not collected as these thermistors require equipment to take readings that was not available.

In general, thermistors BH-01-07, BH-03-07 and BH-06-07, located at the heap leach site, have continued to demonstrate a gradual year-on-year decrease in temperatures at depths greater than 5 to 7 m, depending on location. The same is also true of BH-12-07, BH-18-07 and BH-29-07, located within the proposed waste rock storage area. The remaining thermistors indicate little or no year-on-year trend in temperature at depth, however, the temperatures are higher than the average of previous years.

The project is located in an area of variable permafrost. This is evident from the thermistor plots, which can be interpreted to estimate the active thaw layer and permafrost, where present. The thermistor plots indicate the presence of permafrost at the following locations:

- BH-01-07, BH-03-07 and BH-06-07 to the south and west of the proposed heap leach facility area, where the active thaw layer is approximately 5 to 7 m thick with permafrost below.
- BH-12-07, BH-18-07 and BH-29-07 within the proposed waste rock storage area, where the active thaw layer varies from approximately 5 to 8 m thick with permafrost below.

No permafrost has been observed at thermistors BH-13-07, BH-23-07, and BH-26-07 over the depth monitored within the proposed heap leach facility area. Permafrost may exist below the depth monitored.

4.0 RECOMMENDATIONS

The inspection of the Carmacks Copper Project site was completed on September 28, 2017. Based on the inspection we make the recommendations summarised below.

- Water crossings, including the bridge abutments at Merrice Creek, should continue to be inspected annually and following major rainfall events. Minor maintenance should be carried out, as required to maintain the functionality and safety of these crossings.
- Controls should be implemented to manage runoff and sediment from the area of heavy traffic located in the area of North Williams Creek. The high traffic area should be regraded and repaired.
- The damage to the liner at the fuel storage area should be repaired. The fuel drums should be organized in a manner to allow access and egress for wildlife.

Golder understands that the recommendations will be completed by Carmacks Mining prior to next annual inspection.

5.0 CLOSURE

We draw your attention to the "Limitations and Uses of this Report" included as Attachment 3, which form an integral part of this document. We trust that this letter satisfies your requirements. However, please do not hesitate to contact us should you have any queries or require any further information.

Yours truly,

GOLDER ASSOCIATES LTD.

Benjamin Cox, P.Eng.
Geotechnical Engineer

David Anstey, P.Eng.
Associate, Senior Tailings Engineer

BDC/DRA/crm

Attachments: Attachment 1 – Photographs
Attachment 2 – Thermistor Plots
Attachment 3 – Limitations

ATTACHMENT 1

Photographs

Photograph 1: Crack beneath core storage rack

Photograph 2: Core storage racks

Photograph 3: Cut-slope behind camp

Photograph 4: Core logging shacks

Photograph 5: Vegetation regrowth in area of proposed heap leach pad facility

Photograph 6: Vegetation regrowth on access roads

Photograph 7: Vegetation regrowth on access roads

Photograph 8: Vegetation regrowth on former drill pad

Photograph 9: Vegetation regrowth in Williams Creek floodplain

Photograph 10: Vegetation growth around sediment fencing

Photograph 11: Vegetation regrowth on access road in proposed waste rock storage area

Photograph 12: Lined basin at fuel storage area

Photograph 13: Liner damage at fuel storage area

Photograph 14: Culvert beneath road at North Williams Creek

Photograph 15: High traffic area at North Williams Creek

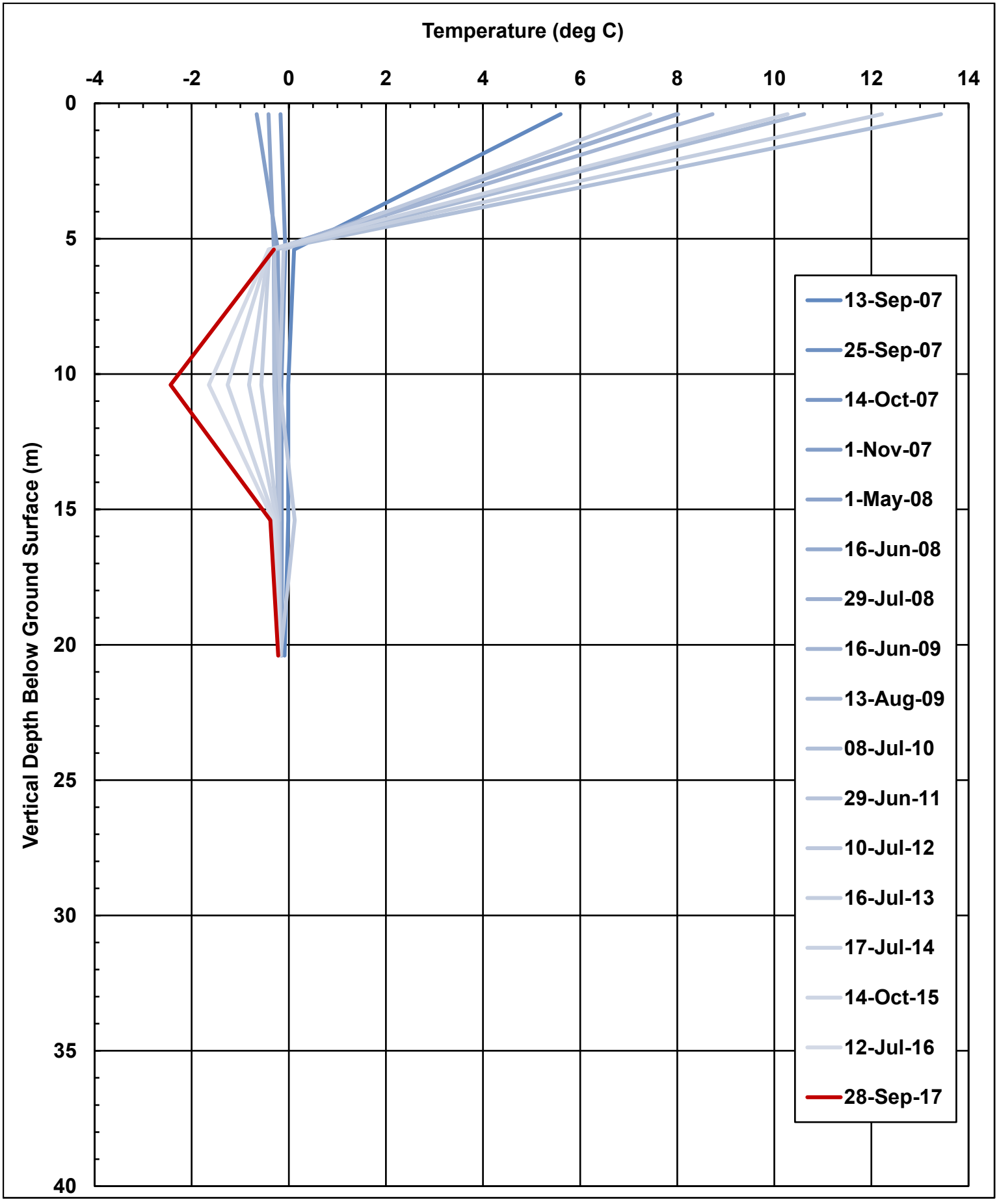
Photograph 16: High traffic area at North Williams Creek

Photograph 17: Williams Creek crossing

Photograph 18: Bridge crossing at Merrice Creek

ATTACHMENT 2

Thermistor Plots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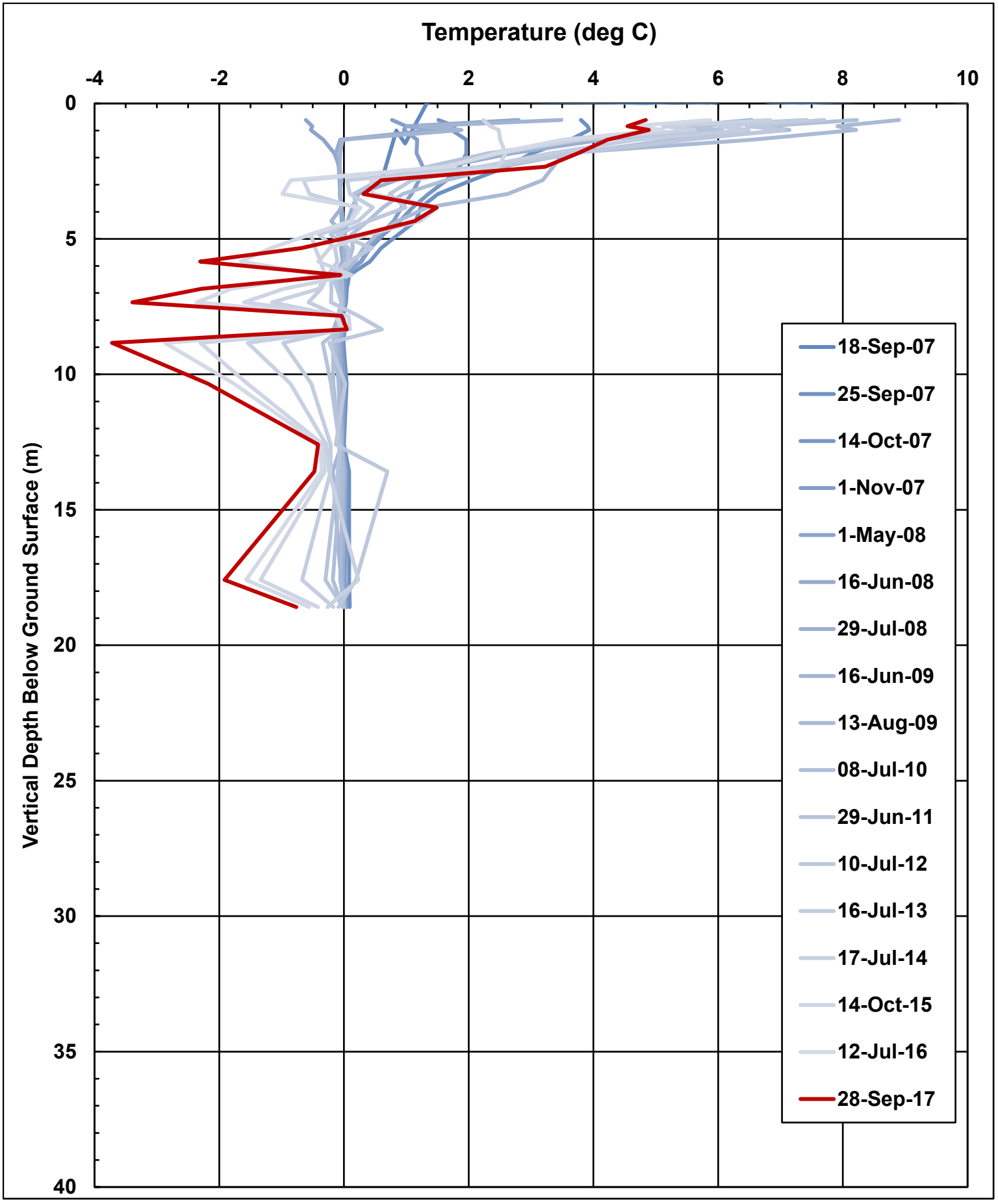
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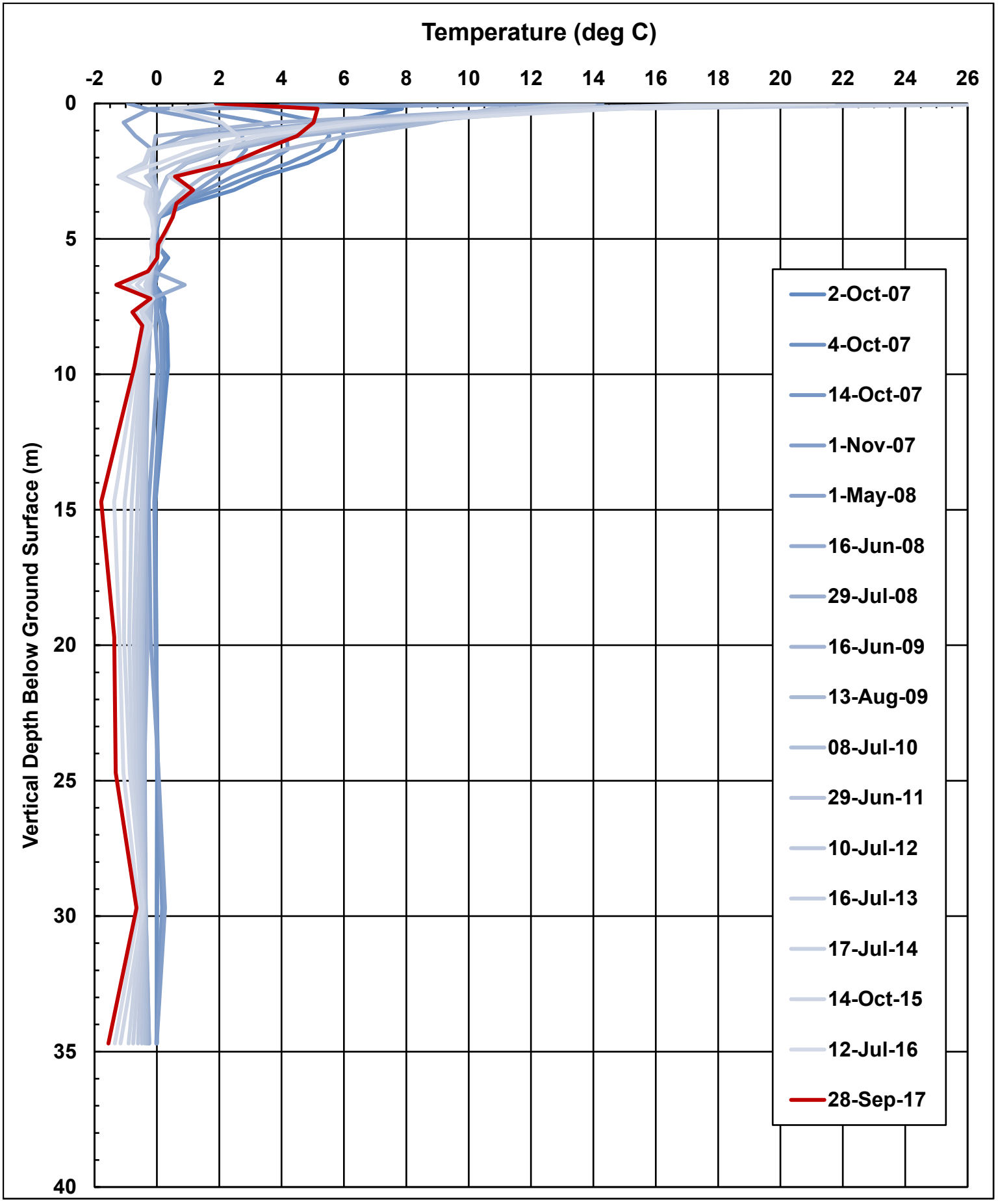
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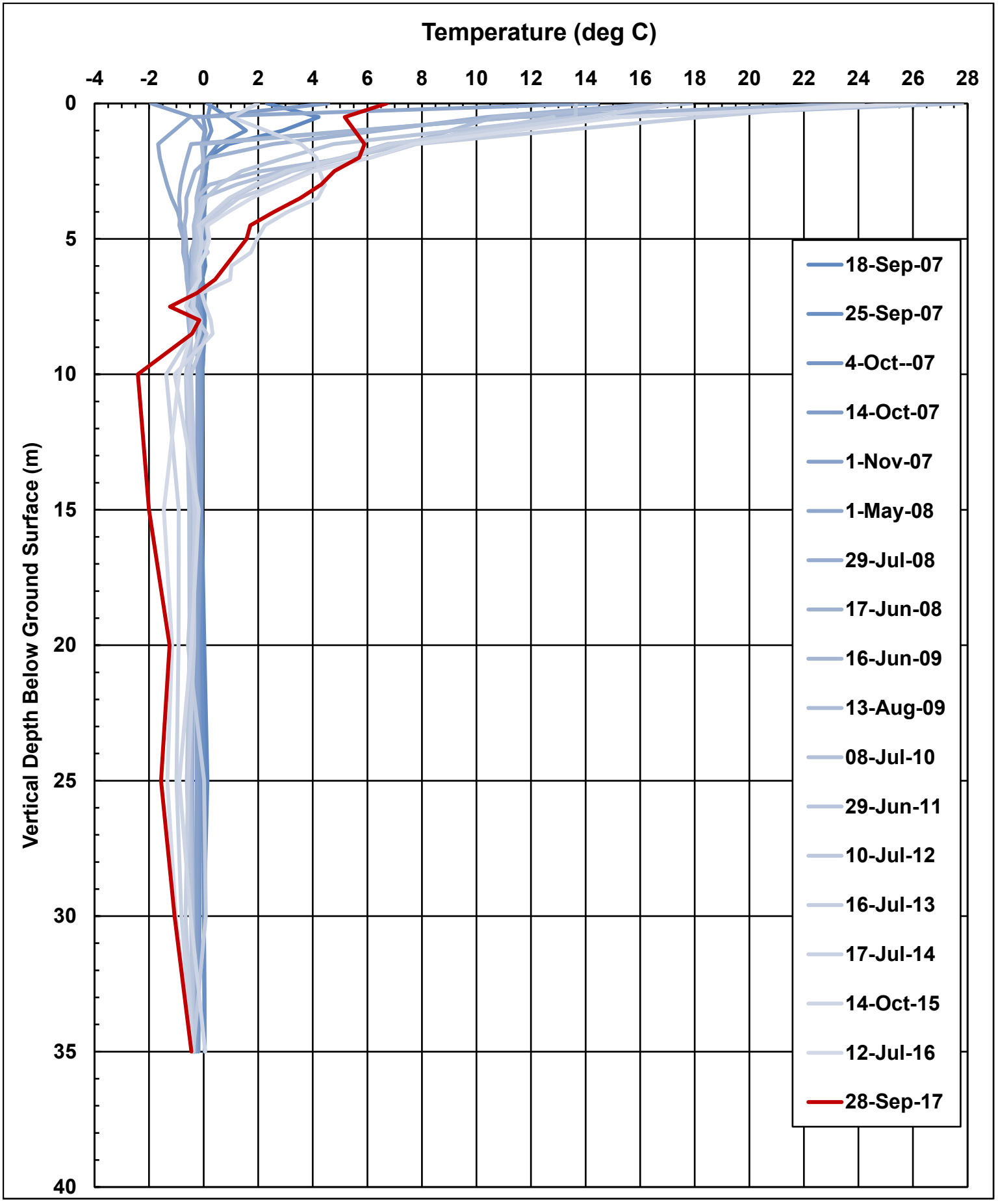
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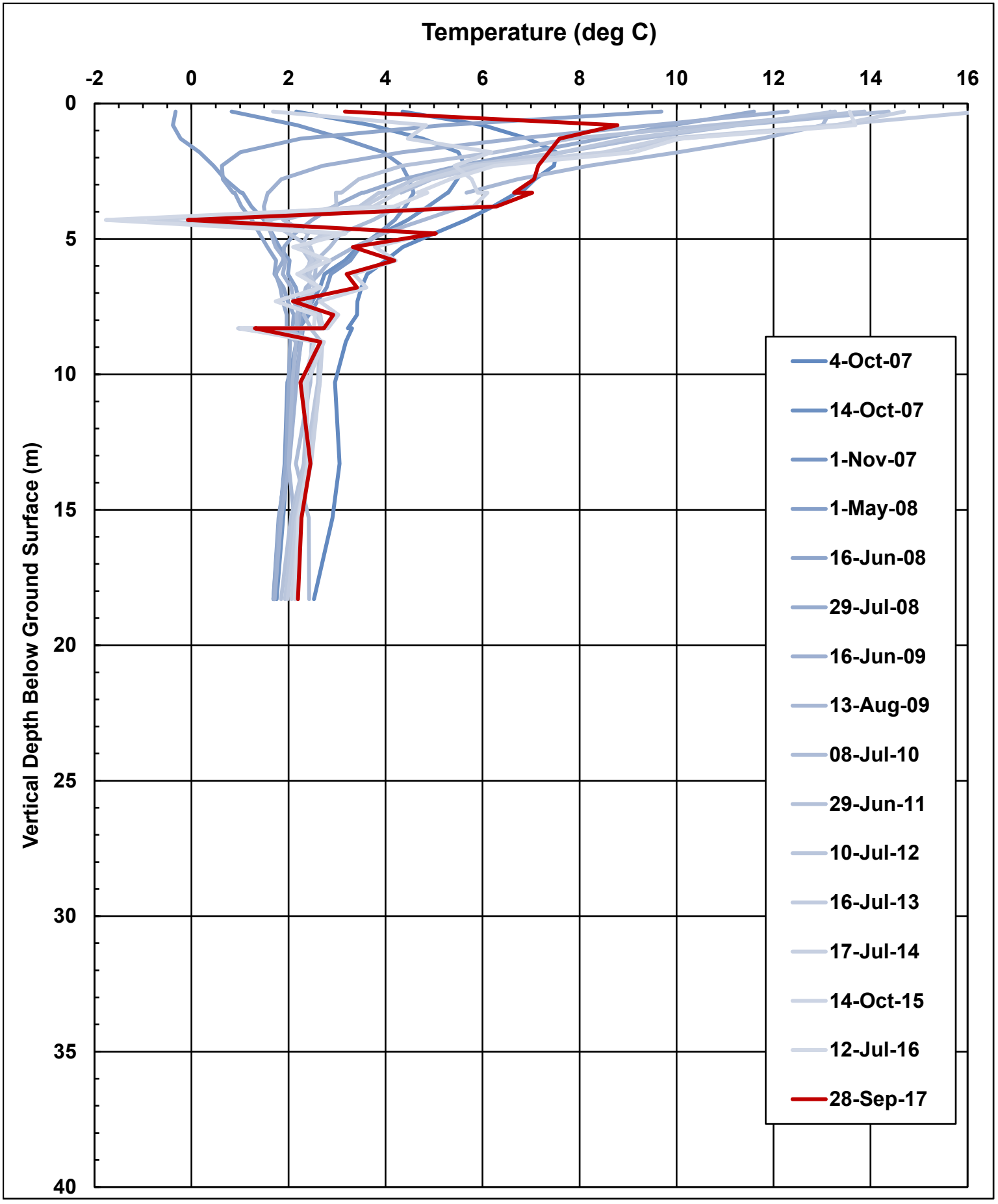
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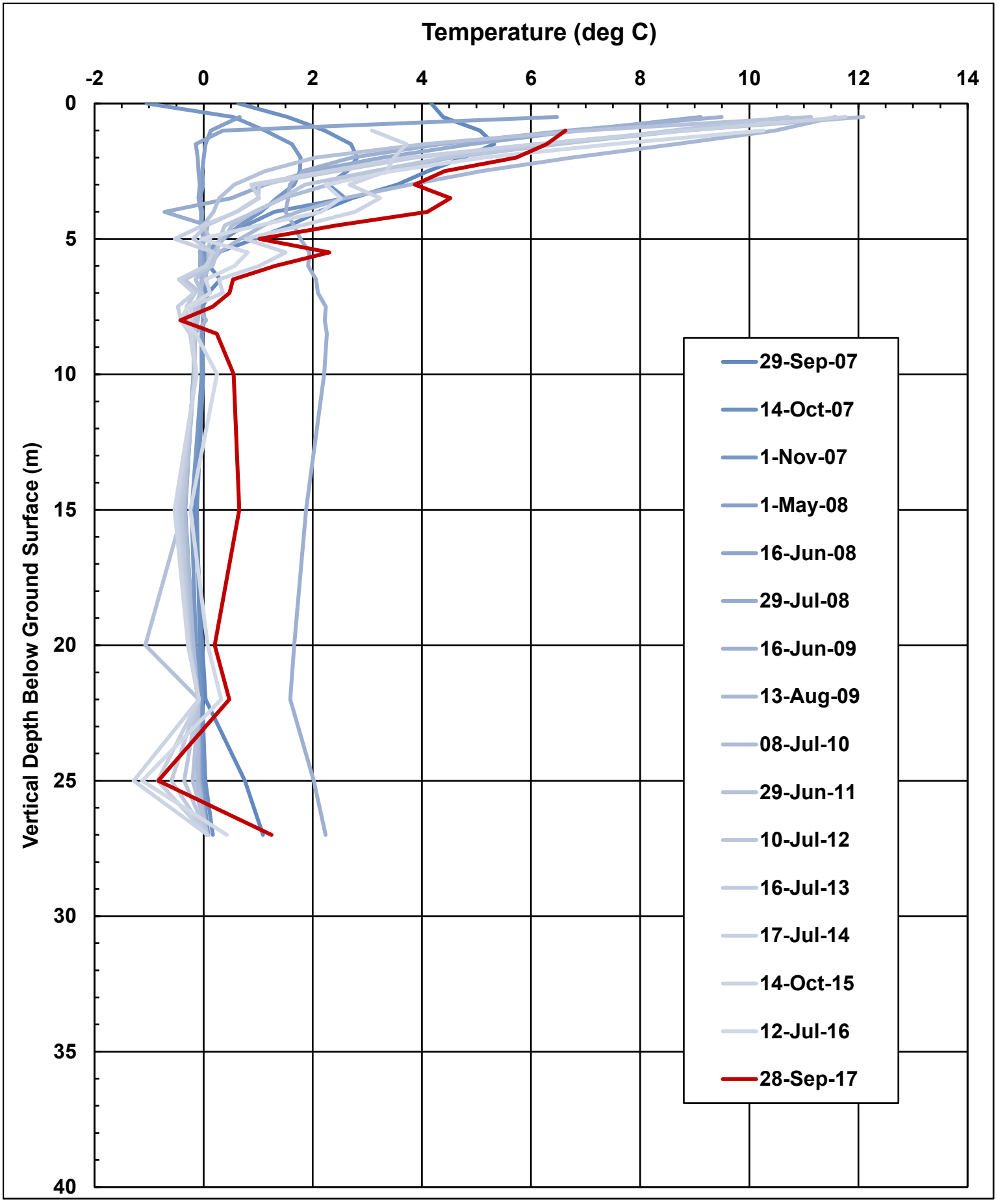
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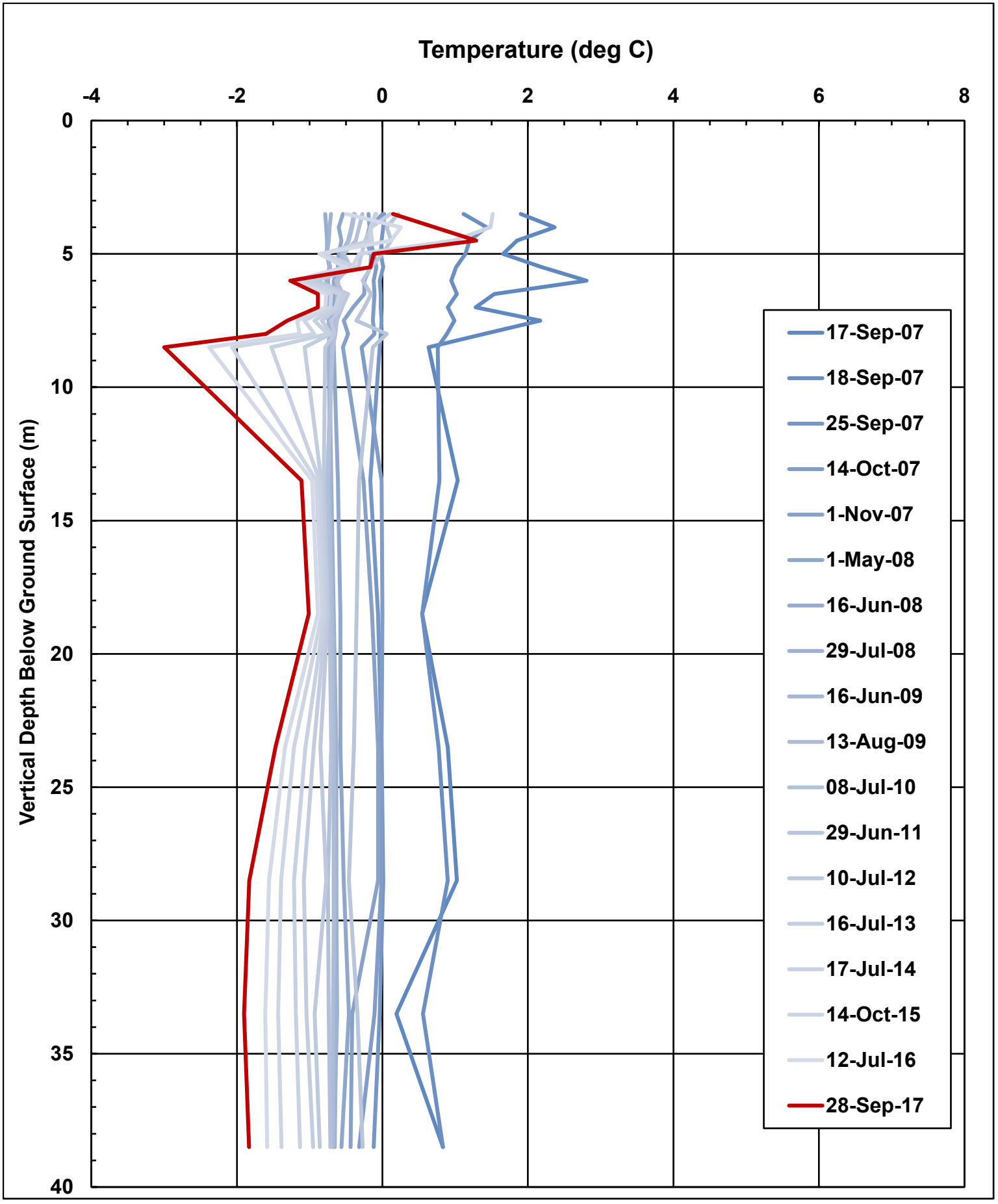
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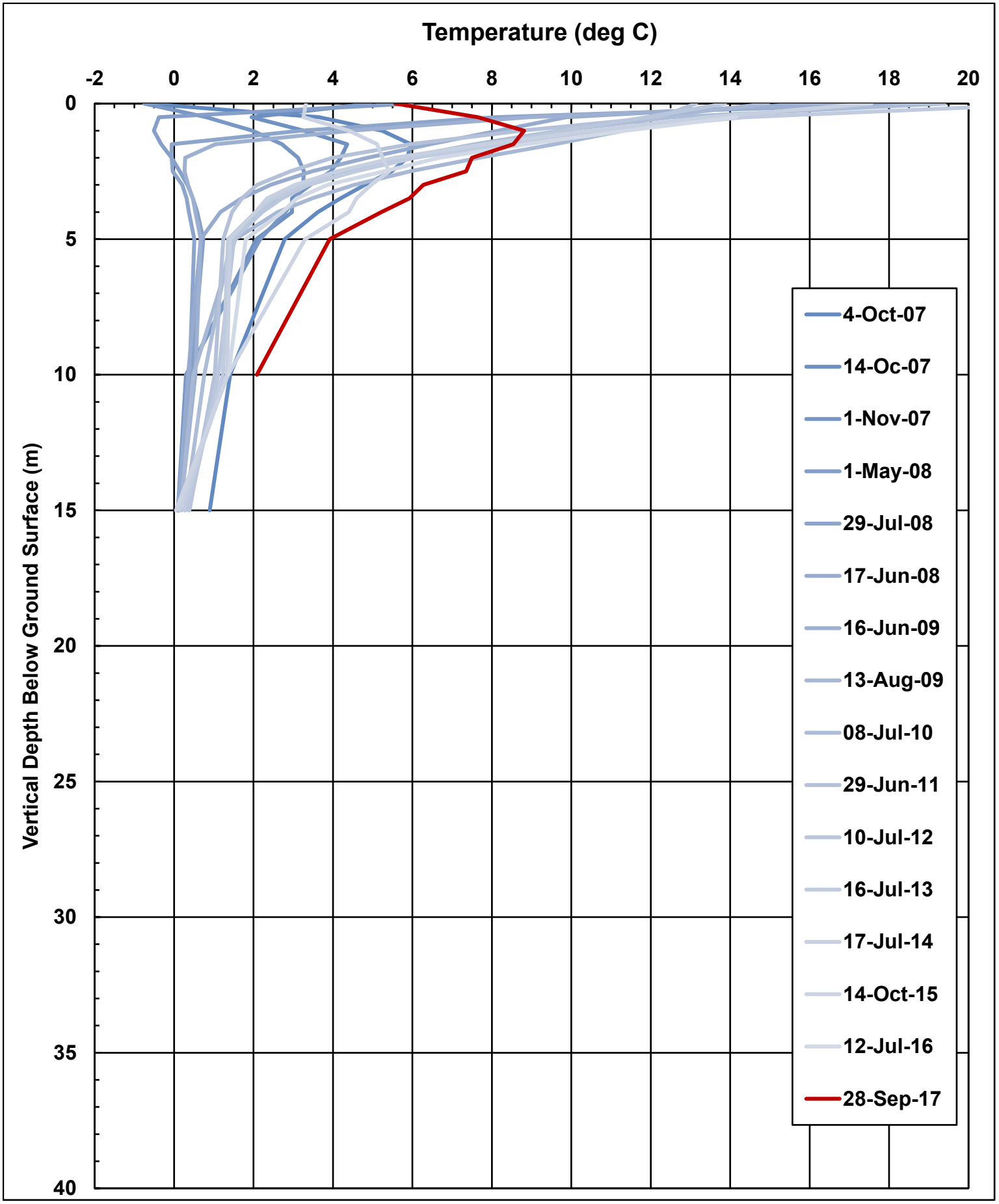
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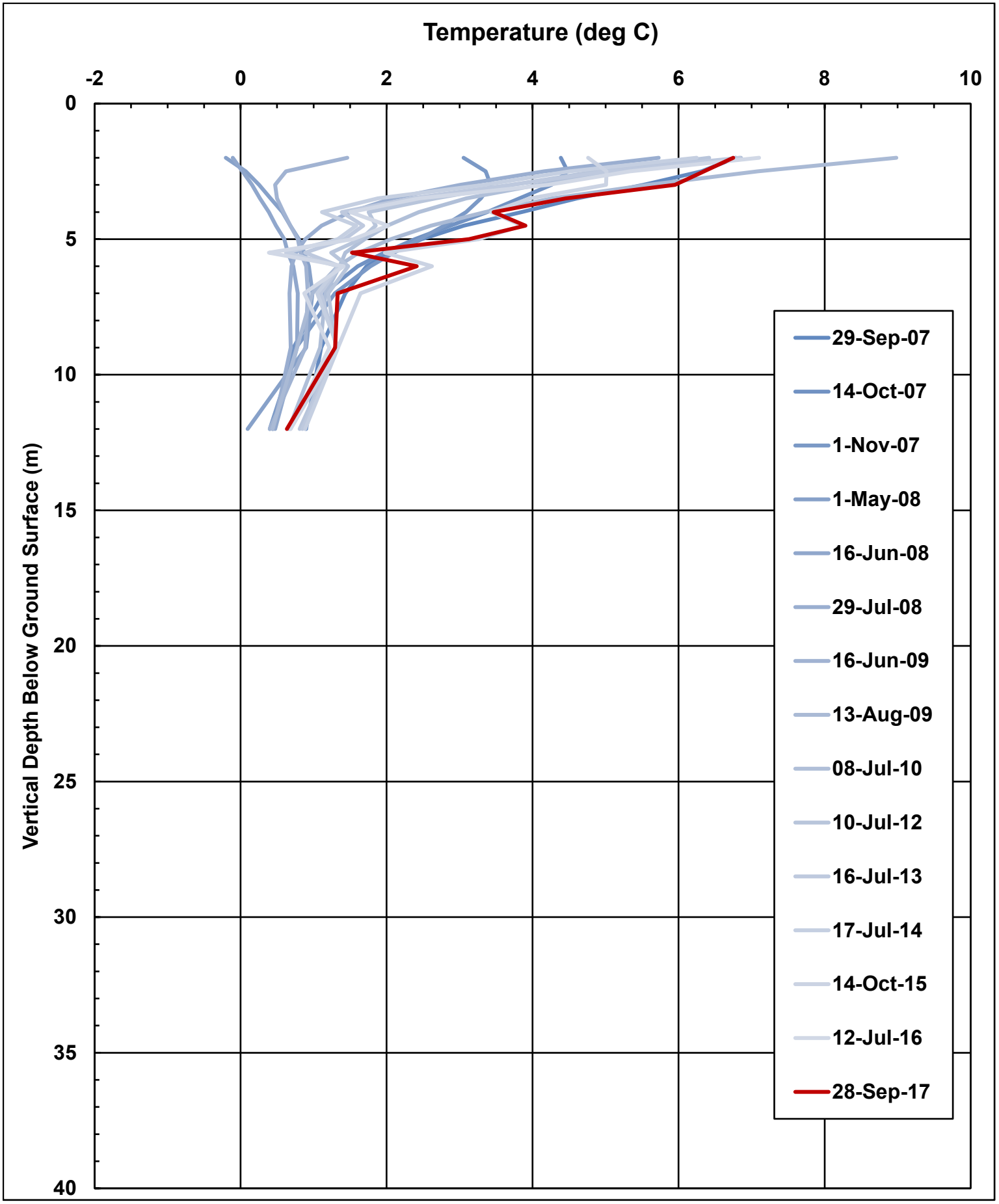
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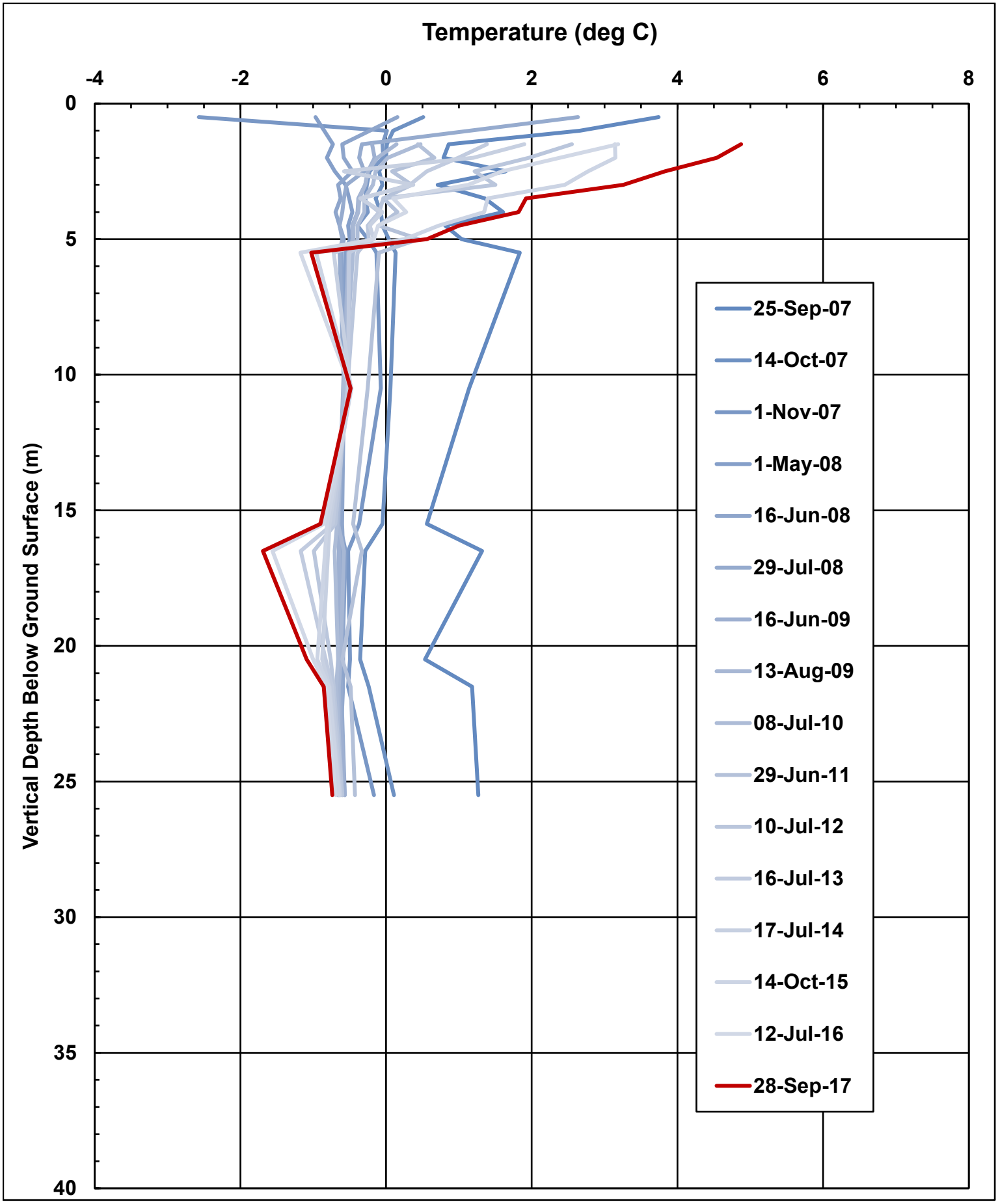
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ATTACHMENT 3

Limitations

IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

Standard of Care: Golder Associates Ltd. (Golder) has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the engineering and science professions currently practising under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made.

Basis and Use of the Report: This report has been prepared for the specific site, design objective, development and purpose described to Golder by the Client. The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location. Any change of site conditions, purpose, development plans or if the project is not initiated within eighteen months of the date of the report may alter the validity of the report. Golder cannot be responsible for use of this report, or portions thereof, unless Golder is requested to review and, if necessary, revise the report.

The information, recommendations and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without Golder's express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the client, Golder may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to Golder. The report, all plans, data, drawings and other documents as well as all electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, who authorizes only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell, or otherwise make available the report or any portion thereof to any other party without the express written permission of Golder. The Client acknowledges that electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore the Client cannot rely upon the electronic media versions of Golder's report or other work products.

The report is of a summary nature and is not intended to stand alone without reference to the instructions given to Golder by the Client, communications between Golder and the Client, and to any other reports prepared by Golder for the Client relative to the specific site described in the report. In order to properly understand the suggestions, recommendations and opinions expressed in this report, reference must be made to the whole of the report. Golder cannot be responsible for use of portions of the report without reference to the entire report.

Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the Client in the design of the specific project. The extent and detail of investigations, including the number of test holes, necessary to determine all of the relevant conditions which may affect construction costs would normally be greater than has been carried out for design purposes. Contractors bidding on, or undertaking the work, should rely on their own investigations, as well as their own interpretations of the factual data presented in the report, as to how subsurface conditions may affect their work, including but not limited to proposed construction techniques, schedule, safety and equipment capabilities.

Soil, Rock and Groundwater Conditions: Classification and identification of soils, rocks, and geologic units have been based on commonly accepted methods employed in the practice of geotechnical engineering and related disciplines. Classification and identification of the type and condition of these materials or units involves judgment, and boundaries between different soil, rock or geologic types or units may be transitional rather than abrupt. Accordingly, Golder does not warrant or guarantee the exactness of the descriptions.

Special risks occur whenever engineering or related disciplines are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain subsurface conditions. The environmental, geologic, geotechnical, geochemical and hydrogeologic conditions that Golder interprets to exist between and beyond sampling points may differ from those that actually exist. In addition to soil variability, fill of variable physical and chemical composition can be present over portions of the site or on adjacent properties. **The professional services retained for this project include only the geotechnical aspects of the subsurface conditions at the site, unless otherwise specifically stated and identified in the report.** The presence or implication(s) of possible surface and/or subsurface contamination resulting from previous activities or uses of the site and/or resulting from the introduction onto the site of materials from off-site sources are outside the terms of reference for this project and have not been investigated or addressed.

Soil and groundwater conditions shown in the factual data and described in the report are the observed conditions at the time of their determination or measurement. Unless otherwise noted, those conditions form the basis of the recommendations in the report. Groundwater conditions may vary between and beyond reported locations and can be affected by annual, seasonal and meteorological conditions. The condition of the soil, rock and groundwater may be significantly altered by construction activities (traffic, excavation, groundwater level lowering, pile driving, blasting, etc.) on the site or on adjacent sites. Excavation may expose the soils to changes due to wetting, drying or frost. Unless otherwise indicated the soil must be protected from these changes during construction.

Sample Disposal: Golder will dispose of all uncontaminated soil and/or rock samples 90 days following issue of this report or, upon written request of the Client, will store uncontaminated samples and materials at the Client's expense. In the event that actual contaminated soils, fills or groundwater are encountered or are inferred to be present, all contaminated samples shall remain the property and responsibility of the Client for proper disposal.

Follow-Up and Construction Services: All details of the design were not known at the time of submission of Golder's report. Golder should be retained to review the final design, project plans and documents prior to construction, to confirm that they are consistent with the intent of Golder's report.

During construction, Golder should be retained to perform sufficient and timely observations of encountered conditions to confirm and document that the subsurface conditions do not materially differ from those interpreted conditions considered in the preparation of Golder's report and to confirm and document that construction activities do not adversely affect the suggestions, recommendations and opinions contained in Golder's report. Adequate field review, observation and testing during construction are necessary for Golder to be able to provide letters of assurance, in accordance with the requirements of many regulatory authorities. In cases where this recommendation is not followed, Golder's responsibility is limited to interpreting accurately the information encountered at the borehole locations, at the time of their initial determination or measurement during the preparation of the Report.

Changed Conditions and Drainage: Where conditions encountered at the site differ significantly from those anticipated in this report, either due to natural variability of subsurface conditions or construction activities, it is a condition of this report that Golder be notified of any changes and be provided with an opportunity to review or revise the recommendations within this report. Recognition of changed soil and rock conditions requires experience and it is recommended that Golder be employed to visit the site with sufficient frequency to detect if conditions have changed significantly.

Drainage of subsurface water is commonly required either for temporary or permanent installations for the project. Improper design or construction of drainage or dewatering can have serious consequences. Golder takes no responsibility for the effects of drainage unless specifically involved in the detailed design and construction monitoring of the system.

Appendix B. 2017 Annual Report of Activities under Quartz Mining LUP LQ00247

REPORT OF ACTIVITIES RELATING TO THE 2017 FIELD SEASON, CARMACKS COPPER-GOLD-SILVER PROJECT

Quartz LUP LQ00427

Whitehorse Mining District, Yukon Territory

NTS 115I07 62° 20' N 136° 41' W

Grant numbers: Y 51118; Y 51149-Y 51152; Y 51181; Y 59373; Y 59382; YB26708-YB26750; YB36240-YB36252; YB36254; YB36256; YB36446-YB36451; YB36765-YB36777; YB36898; YB36899; YB36929-YB36931; YB36933; YB36962-YB36964; YB96620; YB96622; YB96626-YB96630; YB96632; YB96634; YB96636-YB96647; YB96986-YB96998; YB97068; YB97251; YC39221-YC39254; YC60381-YC60420; YC65320-YC65324; YC65554- YC65580; YC66844-YC66873.

Owner and operator of claims: Carmacks Mining Corp., a wholly owned subsidiary of Copper North Mining Corp.

Prepared by:

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Vancouver, BC, V6E 2M6

and

Dev Rishy-Maharaj, BSc.
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Phone: +1 604.398.3452

dramsey@coppernorthmining.com

Table of Contents

List of Figures

List of Tables

1.0 INTRODUCTION

This Annual Report has been prepared by Copper North Mining Corp. and covers the period from January 1, 2017 to December 31, 2017. The report summarizes the exploration activities conducted during 2017 and details the location and magnitude of related disturbances. The Carmacks Copper-Gold-Silver Project (the Project) remains at an exploration and development stage – no construction has yet begun at the proposed mine site.

1.1 Location and Access

The Carmacks property is located at Williams Creek, in the Dawson Range, approximately 200 km north of Whitehorse, and 37 km northwest of Carmacks, Yukon (Figures 1 and 2; NTS mapsheet 115I07 at 62° 20’ N 136° 41’ W)

Access to the property is by road. The Freegold Road runs from Carmacks northwest for approximately 34 km and then north for 13 km via the Carmacks Copper access road, crossing Merrice Creek and Williams Creek, to the exploration camp. The gravel-surface Freegold Road is maintained by Yukon Government and is readily passable from spring through fall. The Carmacks Copper access road is narrow and has rough and steep sections, requiring a 4x4 vehicle, especially after heavy rains.

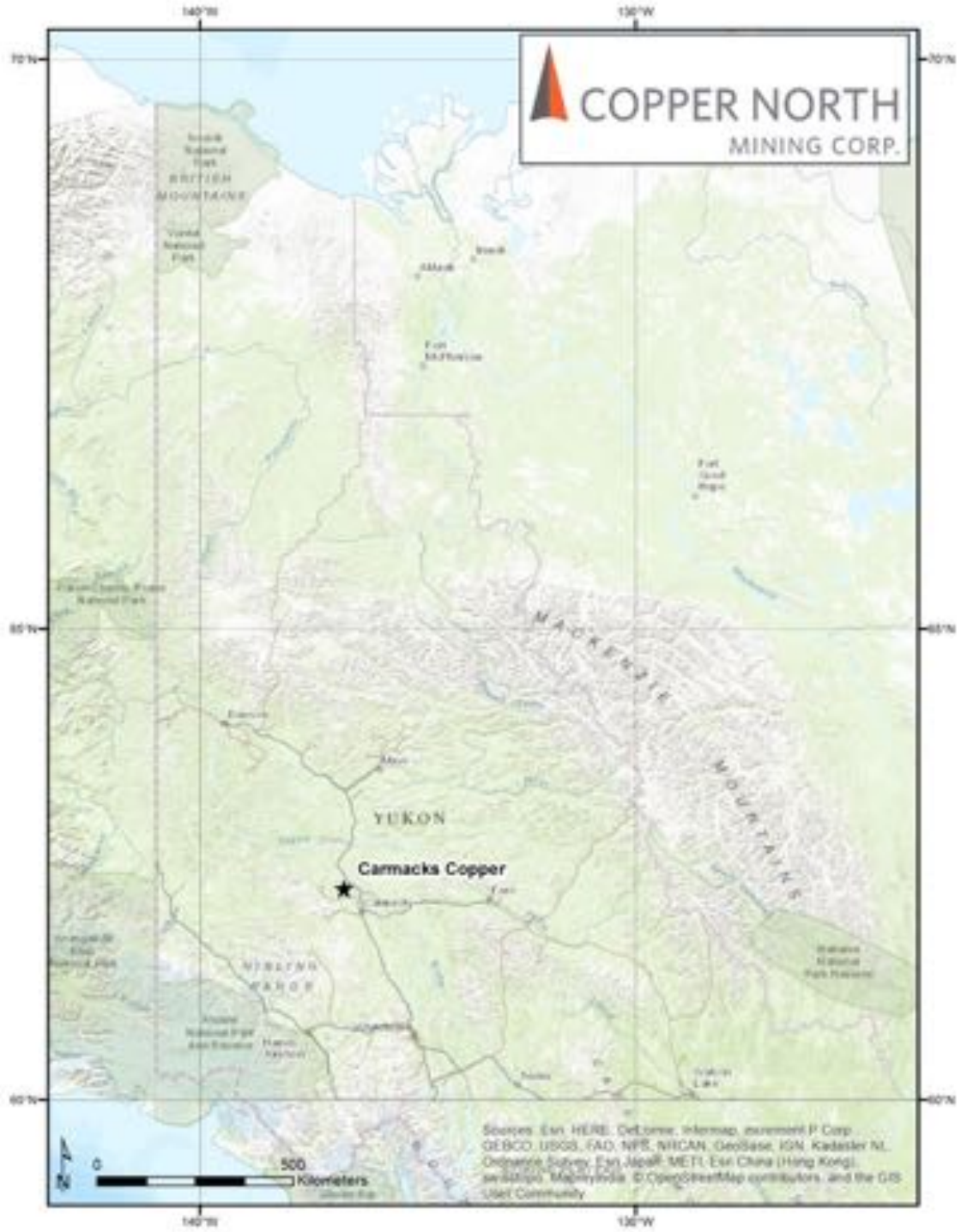

Figure 1. Location of the Carmacks Copper-Gold-Silver Project, Yukon Territory, Canada.

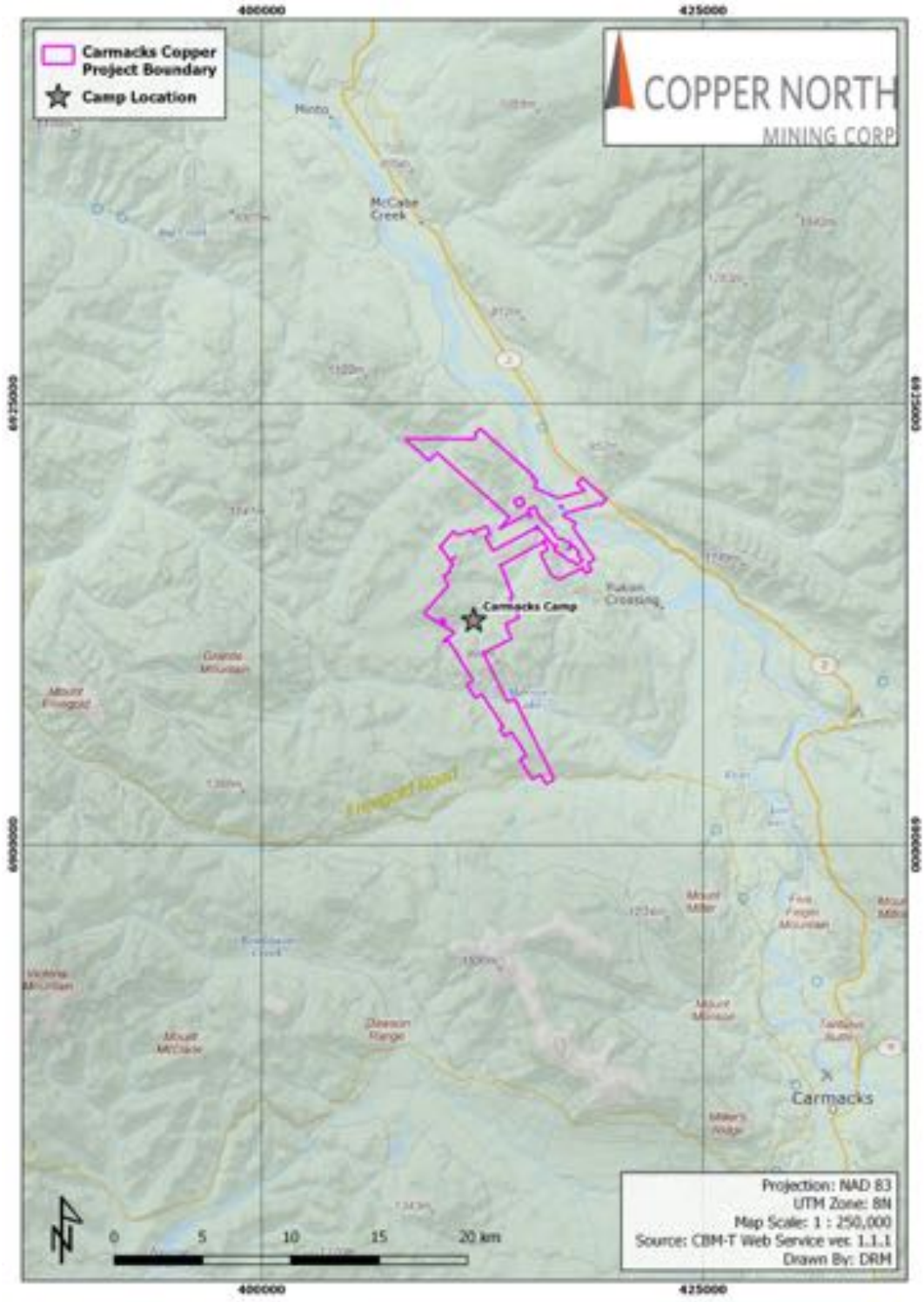

Figure 2. Location of the Carmacks Copper-Gold-Silver Project, Yukon Territory, Canada.

2.0 PHYSIOGRAPHY AND CLIMATE

The property is in the Dawson Range Mountains. The area is characterized by gently rolling hills that are generally less than 1800 m elevation and are covered by black spruce, white spruce, pine, poplar, birch, and alder trees at lower elevations and alpine grasses and scrub willows at higher elevations and in the alpine terrain.

North facing slopes are generally underlain by permafrost and are generally swampy or boggy with much less tree growth and thick sphagnum moss cover. South facing slopes are generally drier and, in some locations, are free of permafrost.

The climate of the property area is generally fairly-dry in the summer months with most precipitation occurring in July and early August. In the winter months, snow accumulation is generally less than 2 m. Temperatures generally range from -40 °C in winter to 30 °C in summer. Snow begins accumulating in mid to late September and is mostly melted by mid to late May. Forest fires can pose a hazard during spring and summer in dry years.

3.0 2017 EXPLORATION PROGRAM – SUMMARY OF ACTIVITIES

Copper North conducted an exploration program in 2017 consisting of ground geophysics, trenching, and diamond drilling. The mineral deposit is subdivided into zones numbered 1 to 14 and 2000S (Figure 3). The property covers an area including Quartz Claims and Quartz Mining Leased Claims (leases). All technical and physical work was conducted on the claims.

Approximately 469 hectares (total of 94.56 line-km) of ground magnetic survey coverage were completed over three separate grid areas (Zone 2 Grid G, Williams Creek Infill, Zone 13 Infill; Figures 11 to 14). The ground magnetic survey was accomplished without the use of cut lines.

42 diamond drill holes were completed in 2017 (36 mineral exploration holes, 6 groundwater monitoring wells), for a total of 4,511 meters (Table 1).

A single trench was completed during the 2017 exploration program for a total of 40 m^3 excavated (Table 2).

3.1 Total Length and Width of Corridors

No new corridors were created in 2017.

3.2 Total Volume of Trenching per Claim

The total volume of trenched material is estimated at 40 m^3 based on the measured length, average depth, and average width of the trench (Table 2).

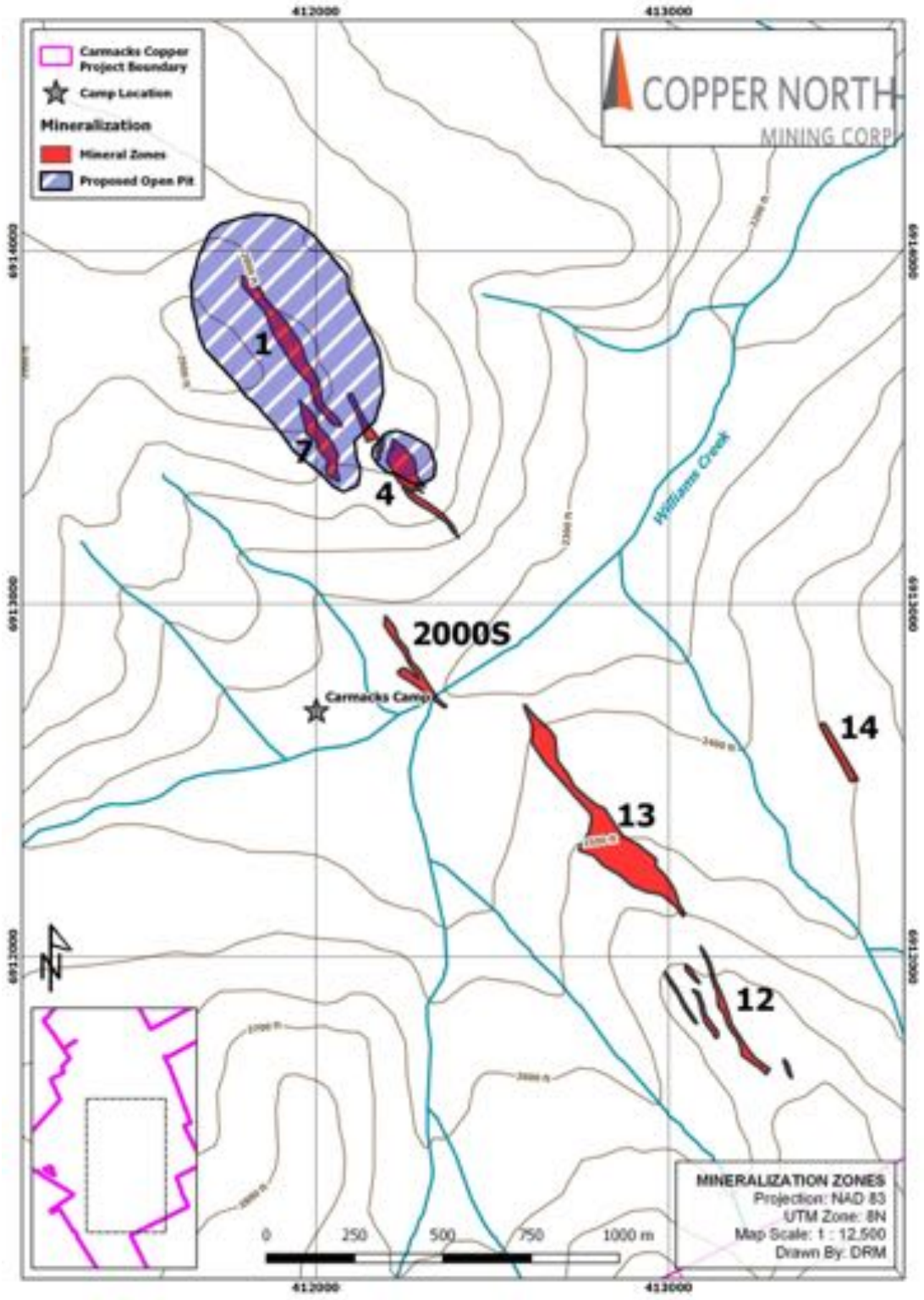

Figure 3. Mineralisation Zones – Carmacks Copper-Gold-Silver Project.

Table 1. Carmacks Project – 2017 Drill Pad Locations, Size, and Reclamation Status

Drill Hole	Drill Pad	Easting	Northing	Claim No.	Length (m)	Width (m)	Pad Area (m^2)	Drill Hole Length (m)	Reclaimed?
Exploration Drill Holes									
CN17-01	**P17-01**	412599	6912510	W 38	23	14	322	151	Yes
CN17-02	**P17-02**	412565	6912569	W 38	22	16	352	149	Yes
CN17-03	**P17-03**	412794	6912587	W 38	20	27	540	154	Yes
CN17-04	**P17-04**	412648	6912298	W 44	20	24	480	111	Yes
CN17-05	**P17-05**	412748	6912259	W 44	22	17	374	101	Yes
CN17-06	*Drilled from P17-05*	412748	6912259	W 44	--	--	--	160	Yes
CN17-07	**P17-07**	412042	6916759	WAR 45	20	20	400	104	Yes
CN17-08	**P17-08**	411947	6916732	WAR 45	20	20	400	83	Yes
CN17-09	**P17-09**	412923	6915694	W 4	20	20	400	152	Yes
CN17-10	**P17-10**	413349	6914989	W 17	20	20	400	104	Yes
CN17-11	**P17-11**	413359	6915264	W 19	20	20	400	117	Yes
CN17-12	*Pad built 2015*	412285	6912850	BOY 24	--	--	--	145	Yes
CN17-13	*Drilled from P17-18*	412387	6912781	AC #2, W 38	--	--	--	121	Yes
CN17-14	**P17-14**	412515	6912623	W 38	26	14	364	100	Yes
CN17-15	*Drilled from P17-18*	412387	6912781	AC #2, W 38	--	--	--	128	Yes
CN17-16	**P17-16**	412459	6912692	W 38	38	24	912	223	Yes
CN17-17	*Drilled from P17-16*	412459	6912692	W 38	--	--	--	169	Yes
CN17-18	**P17-18**	412387	6912781	AC #2, W 38	32	20	640	126	Yes
CN17-19	**P17-19**	412986	6912339	W 45	25	12	300	174	Yes
CN17-20	**P17-20**	413003	6912300	W 45	29	16	464	145	Yes
CN17-21	**P17-21**	412371	6912803	AC #2, BOY 24	24	18	432	138	Yes
CN17-22	**P17-22**	413064	6912179	W 47	24	17	408	94	Yes
CN17-23	**P17-23**	413099	6912196	W 47	24	16	384	120	Yes

Table 1. Continued.

Drill Hole	Drill Pad	Easting	Northing	Claim No.	Length (m)	Width (m)	Pad Area (m^2)	Drill Hole Length (m)	Reclaimed?
CN17-24	**P17-24**	412345	6912827	W 37, BOY 24	22	18	396	152	Yes
CN17-25	**P17-25**	413080	6912223	W 47, W 45	15	24	360	117	Yes
CN17-26	**P17-26**	413062	6912248	W 45	13	24	312	135	Yes
CN17-27	**P17-27**	412308	6912833	BOY 24	20	24	480	102	Yes
CN17-28	**P17-28**	413074	6912156	W 47	22	18	396	82	Yes
CN17-29	**P17-29**	413094	6912128	W 47	21	17	357	81	Yes
CN17-30	**P17-30**	413038	6912169	W 47	18	24	432	53	Yes
CN17-31	**P17-31**	413113	6912160	W 47	22	18	396	119	Yes
CN17-32	**P17-32**	413045	6912142	W 47	17	20	340	53	Yes
CN17-33	**P17-33**	413060	6912114	W 47	18	20	360	50	Yes
CN17-34	**P17-34**	413059	6912017	W 46	20	18	360	52	Yes
CN17-35	**P17-35**	413051	6912044	W 46	20	16	320	47	Yes
CN17-36	Pad built 2015	413001	6912179	W 46				50	Yes
Groundwater Wells									
VW-01-17	**PVW17-01**	410851	6914063	W 10	20	20	400	52	Yes
VW-02-17	**PVW17-02**	411276	6914492	W 8, WAR 36, W 6	20	20	400	47	Yes
VW-03-17	**PVW17-03**	411427	6914197	W 6	20	20	400	81	Yes
VW-04-17	**PVW17-04**	411890	6914396	W 11	20	20	400	49	Yes
VW-05-17	**PVW17-05**	412595	6914594	W 15	20	20	400	75	Yes
VW-06-17A	**PVW17-06**	411831	6914737	GAP 1	20	20	400	43	Yes
					Totals		**14,881**	**4,511**	

Table 2. Carmacks Project – 2017 Trench Location, Dimensions, and Reclamation Status.

	Start		End				Average Dimension (m)					
Trench	Easting	Northing	Easting	Northing	Location	Title	Length	Depth	Width	Volume (m^3)	Surface Area (m^2)	Reclaimed?
T2017A	413340	6914982	413325	6914969	W 17	Claim	20	2	1	40	40	Yes

3.3 Number of New Clearings per Claim and Purpose

36 new drill pads were created in 2017. Cleared drill pad areas for new drill hole locations (Table 1) were calculated using paced-in pad dimensions, when available, or using an average drill pad size of 20 x 20 metres (~400m^2) for pads which were not accessible for pacing due to snowfall.

Drill pads were blazed with heavy equipment and contoured to the appropriate geometry for drill and sump placement.

All drill sumps were backfilled, contoured, and landscaped such that they minimize the loss of soil and encourage the re-establishment of vegetation.

The location of each drill pad was recorded using waypoint-averaged GPS locations (Table 1).

Table 3. Areas of New Clearings by Claim.

Claim	Number of Drill Pads	Drill Pad Area (m^2)	Number of Trenches	Trench Area (m^2)	Total Cleared Area (m^2)
WAR 45	2	800	0	0	800
W 4	1	400	0	0	400
W 19	1	400	0	0	400
W 17	1	400	1	40	440
W 15	1	400	0	0	400
GAP 1	1	400	0	0	400
W 11	1	400	0	0	400
W 6	1	400	0	0	400
W 8	1	400	0	0	400
W 10	1	400	0	0	400
BOY 24	2	876	0	0	876
AC #2	2	1,072	0	0	1,072
W 38	5	2,490	0	0	2,490
W 44	2	854	0	0	854
W 45	3	1,076	0	0	1,076
W 47	9	3,433	0	0	3,433
W 46	2	680	0	0	680
Totals	**36**	**14,881**	**1**	**40**	**14,921**

3.4 Total Length and Width of New Access Roads

No new access roads were constructed during 2017.

3.5 Total Length of Road Upgrades

No road surfaces were upgraded during 2017.

3.6 Total Length and Width of New Trails

Access to drill pad and trench locations was done using existing roads or trails, or along historic trails, where possible. New trails were blazed with heavy equipment to access target areas where no other route was feasible. The vegetative mat was not removed from these blazed trails and the only disturbance was the felling of small trees by the movement of heavy equipment through forested areas.

A total length of 3,108 m of new/refreshed trails, approximately 3 m wide were created in this manner for an estimated area of 9,324 m^2 (Table 4).

Table 4. New/Refreshed Trails Developed in 2017. See Figures 5 to 10 for Locations.

Trail Name	Claim(s)	Trail Length (m)	Trail Area (m^2)	New/Refreshed?
R2017A	WAR 26, WAR 46, WAR 45	839	2,517	New
R2017B	GAP 4, W 17, W 19	680	2,040	New
R2017C	W 4	111	333	New
R2017D	W 6, W 8	161	484	New
R2017E	W 8, W 10	238	713	New
R2017F	BOY 24, W 37, AC #2	110	330	New
R2017G	W 38	197	592	New
R2017H	W 38	40	121	New
R2017I	W 38	24	72	New
R2017J	W 44	131	393	New
R2017K	W 44	74	222	New
R2017L	W 45	28	84	New
R2017M	W 45, W 47	32	95	New
R2017N	W 47	10	31	New
R2017O	W 46, W 47	207	622	New
R2017P	W 46, W 47	22	66	New
R2017Q	W 46, W 47	56	167	New
R2017R	W 47	80	240	New
R2017S	W 46	16	47	New
R2017T	W 45	24	71	New
R2017U	W 38	29	87	New
	Totals	**3,108**	**9,324**	

3.7 Total Length of Off-road Use

There was no significant use of rubber-tyre vehicles off roads or trails except marginal to existing trails or roads where necessary for turning around or passing an oncoming vehicle.

3.8 Total Amount of Explosives

No explosives were used in the 2017 field season.

3.9 Total Disturbed Area

Table 5. Total Area Disturbed in 2017 by Disturbance Type.

Disturbance Type	Area (m^2)
Trails	9,324
Drill Pads	14,881
Trenches	40
Total	**24,245**

3.10 Underground Material Moved to Surface

No underground development has occurred on the property.

3.11 Reclamation Activity Description

The vegetative mat was removed with heavy equipment prior to trenching and stockpiled separately to preserve the seed and root stock for reclamation. Excavated topsoil was stockpiled separately from colluvial material and bedrock. Drill pad sumps were backfilled with the excavated bedrock and colluvial material, covered with topsoil, and then topped with the vegetative mat.

All drill sumps were contoured and landscaped such that they minimise the loss of soil in run-off and encourage the re-establishment of vegetation. Trees felled during trenching were laid across the trenched area after backfilling to further aid in preventing erosion and encourage the establishment of a habitat for wildlife. Leaning trees were knocked down to the ground to ensure that no safety hazard remained to wildlife or people.

3.12 Status of Camp

The camp buildings and trailers were winterized by draining the water systems, boarding up the windows with plywood, and removing fuel from heating stove barrels. All food, recyclable containers, and garbage was removed from the camp. The core shack, office, and storage shed were locked with padlocks. The remaining buildings and trailers were left open for leisure use by the local community.

3.13 Status of Fuel Storage

No fuel or empty drums were left in the fuel storage.

3.14 Bulk Sampling Update

No bulk samples were taken in 2017.

4.0 WILDLIFE LOGS

A log of wildlife sightings was maintained in camp and entries made when wildlife of note was observed. Sightings of rabbits, chipmunks, squirrels, ravens, and spruce grouse were too common to keep accurate records. Caribou, elk, bison, muskox, wolverine, sheep, goats or grizzly bear were never observed on the property. Moose were not observed directly on the property although moose sign is common. The 2017 log was left behind in camp and the specific 2017 observations will be reported in the 2018 report of activities.

5.0 MAPS

The locations of all trails, drill pads, and trenches developed during 2017 are shown in the maps below.

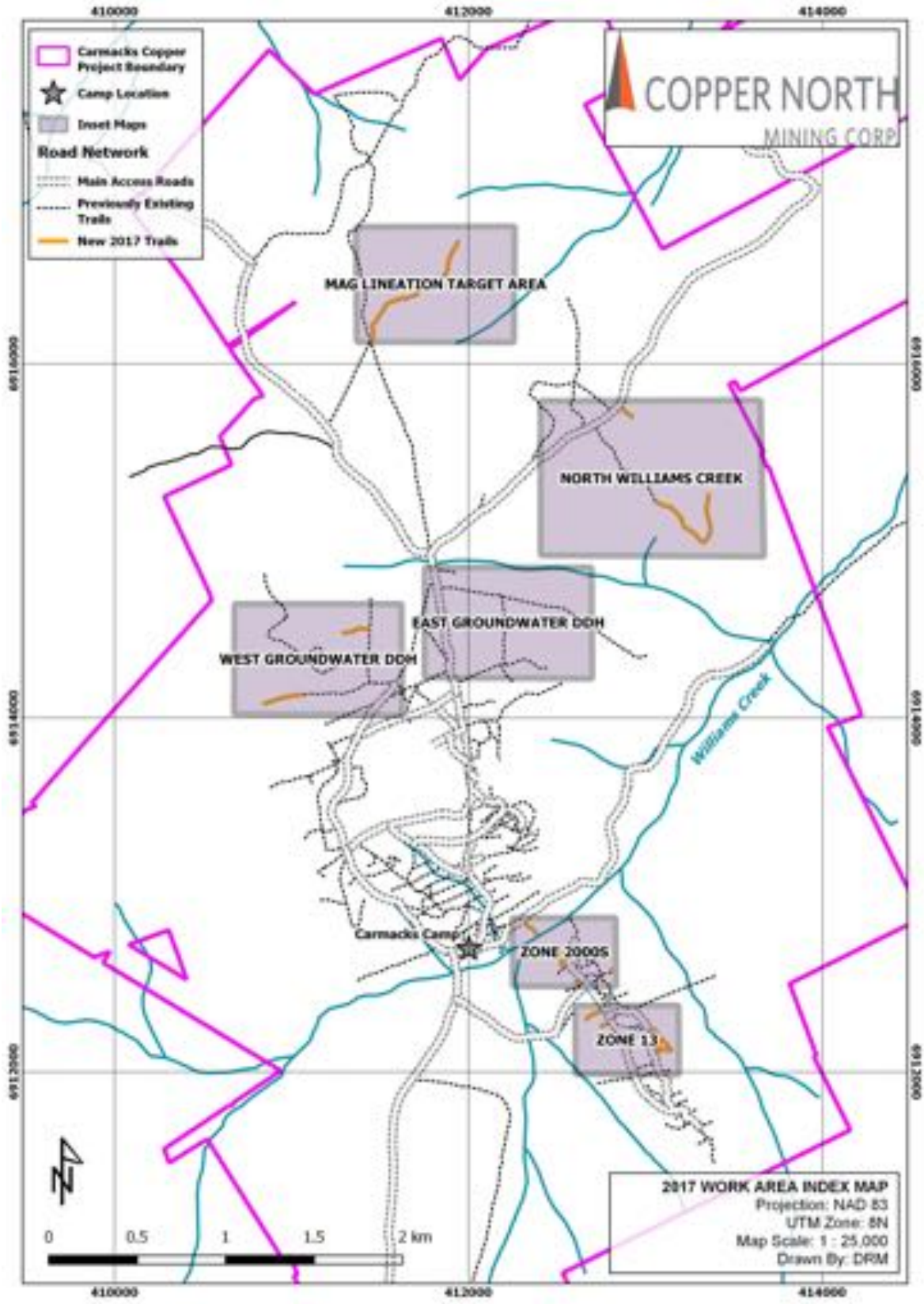

Figure 4. Carmacks Project – 2017 Index of Work Areas

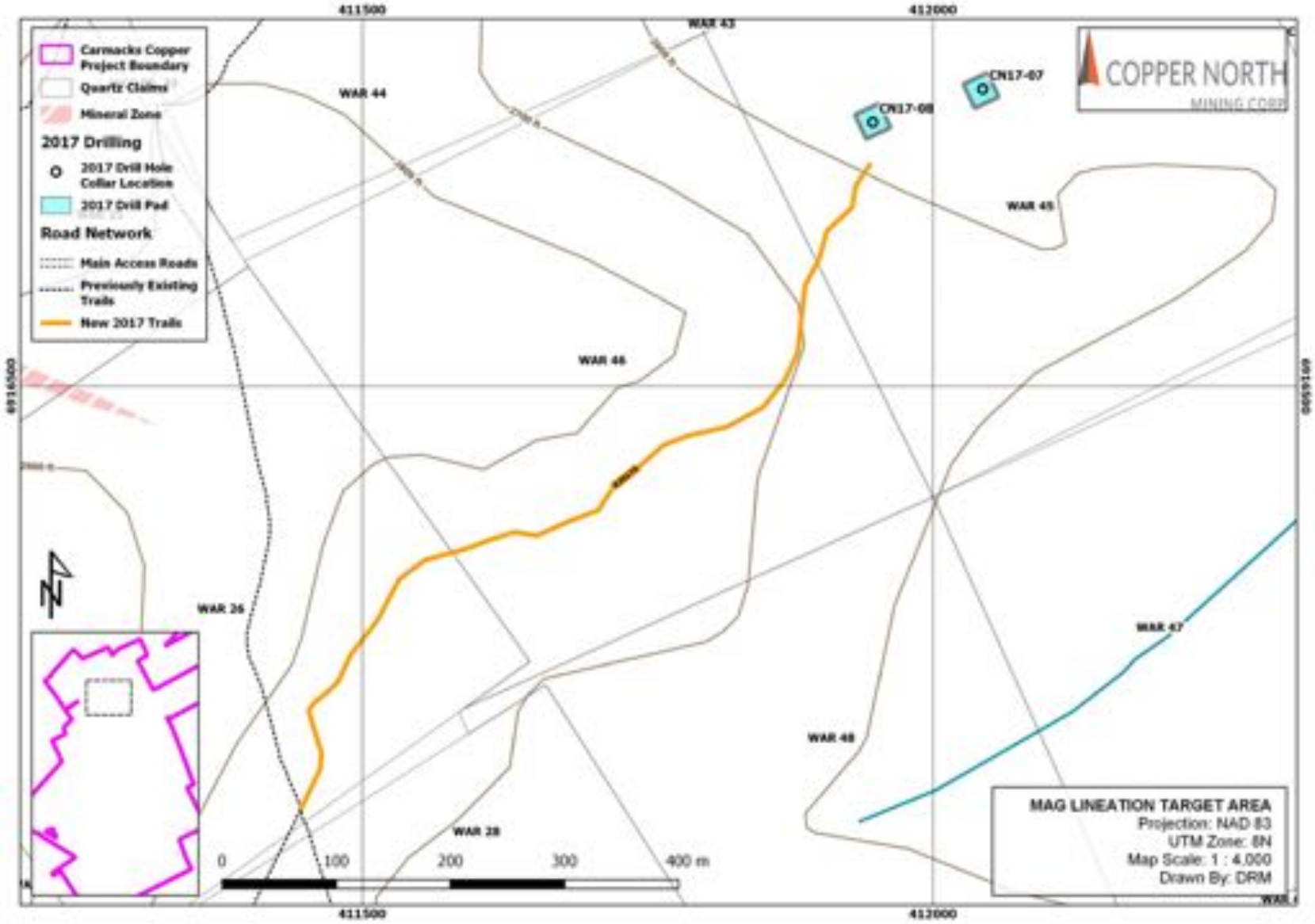

Figure 5. Carmacks Project – Mag Lineation Target Area, 2017 program trails and drill pad locations

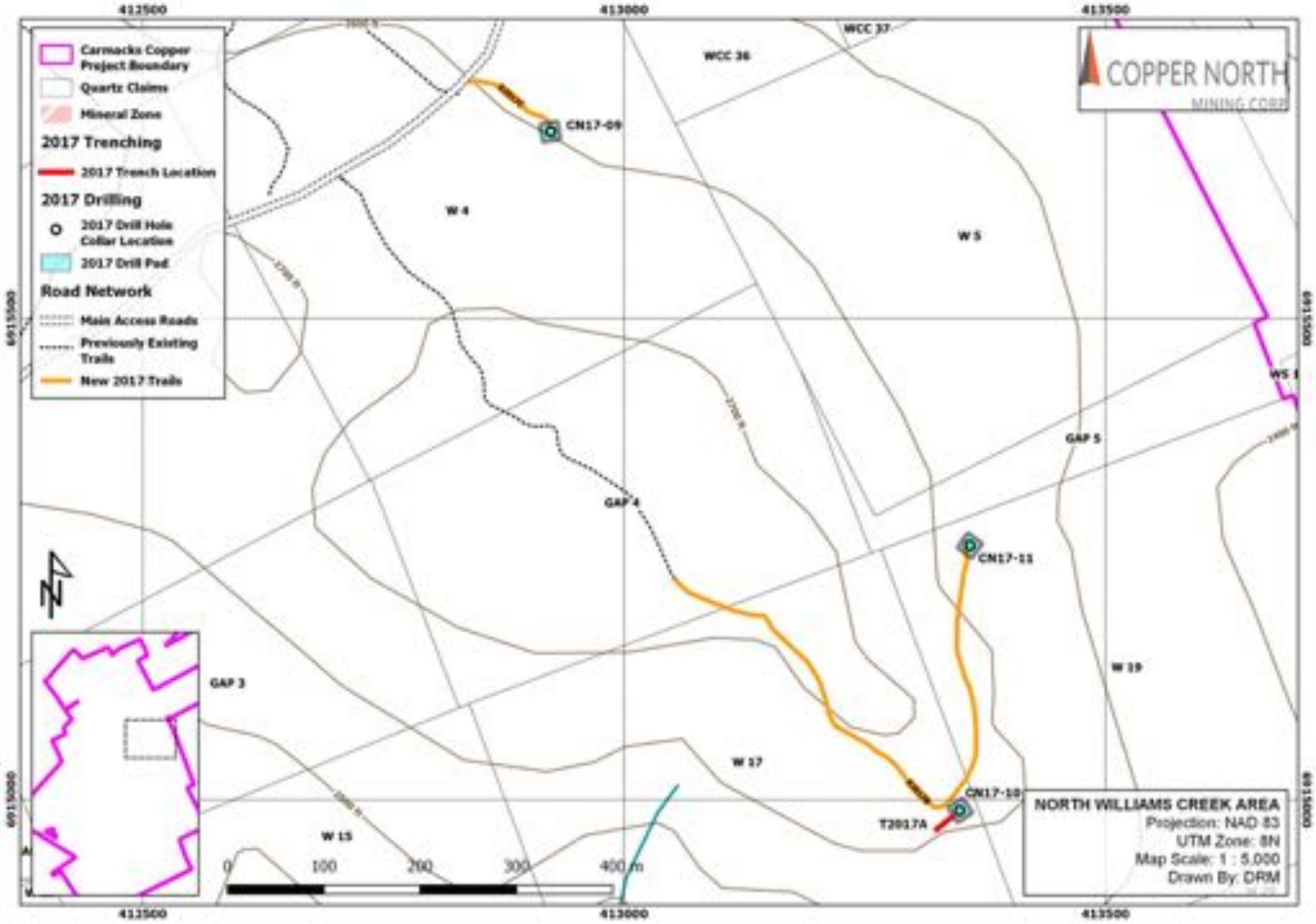

Figure 6. Carmacks Project – North Williams Creek Area, 2017 program trails and drill pad locations

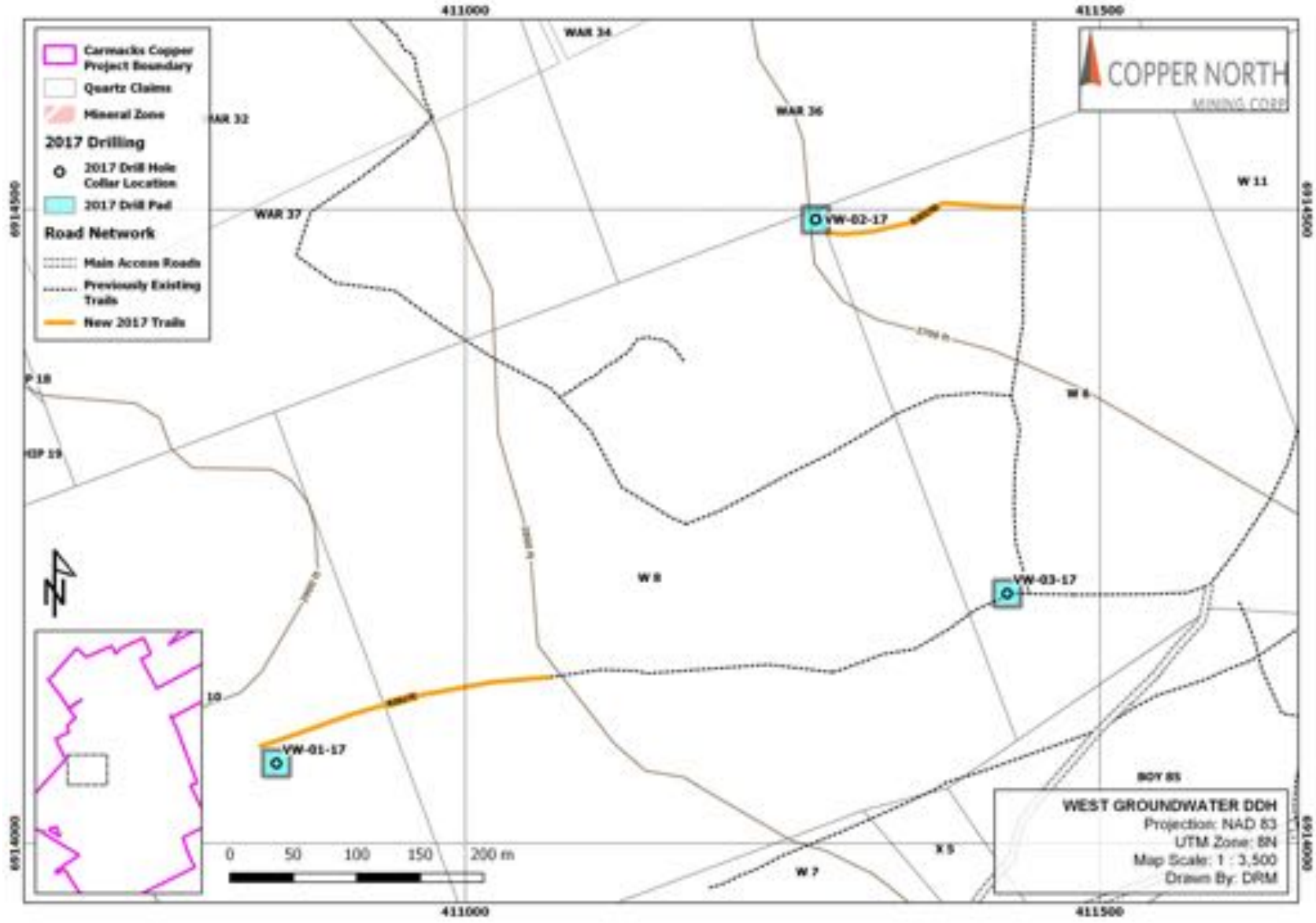

Figure 7. Carmacks Project – West Groundwater Area, 2017 program trails and drill pad locations

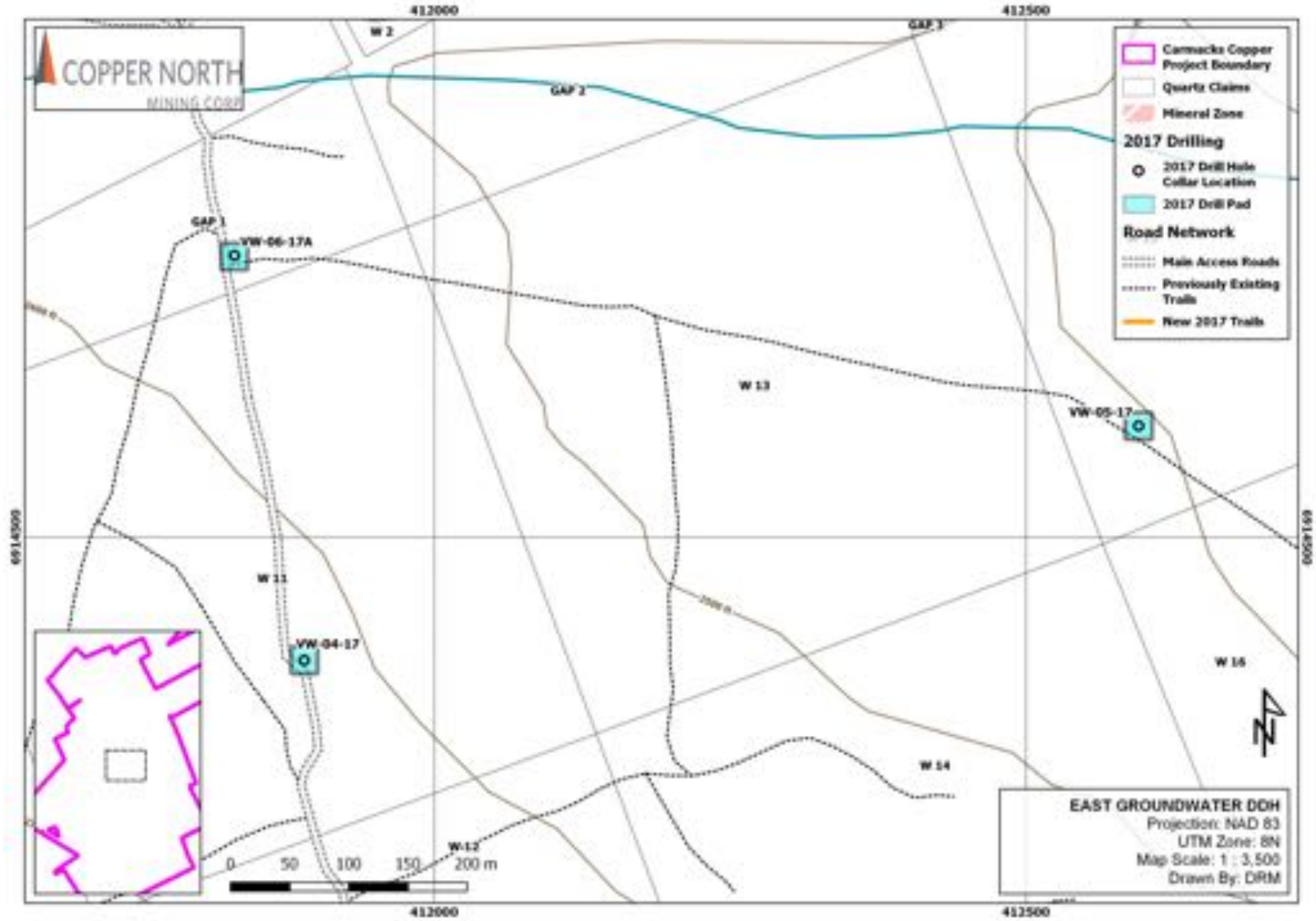

Figure 8. Carmacks Project – East Groundwater Area, 2017 program trails and drill pads

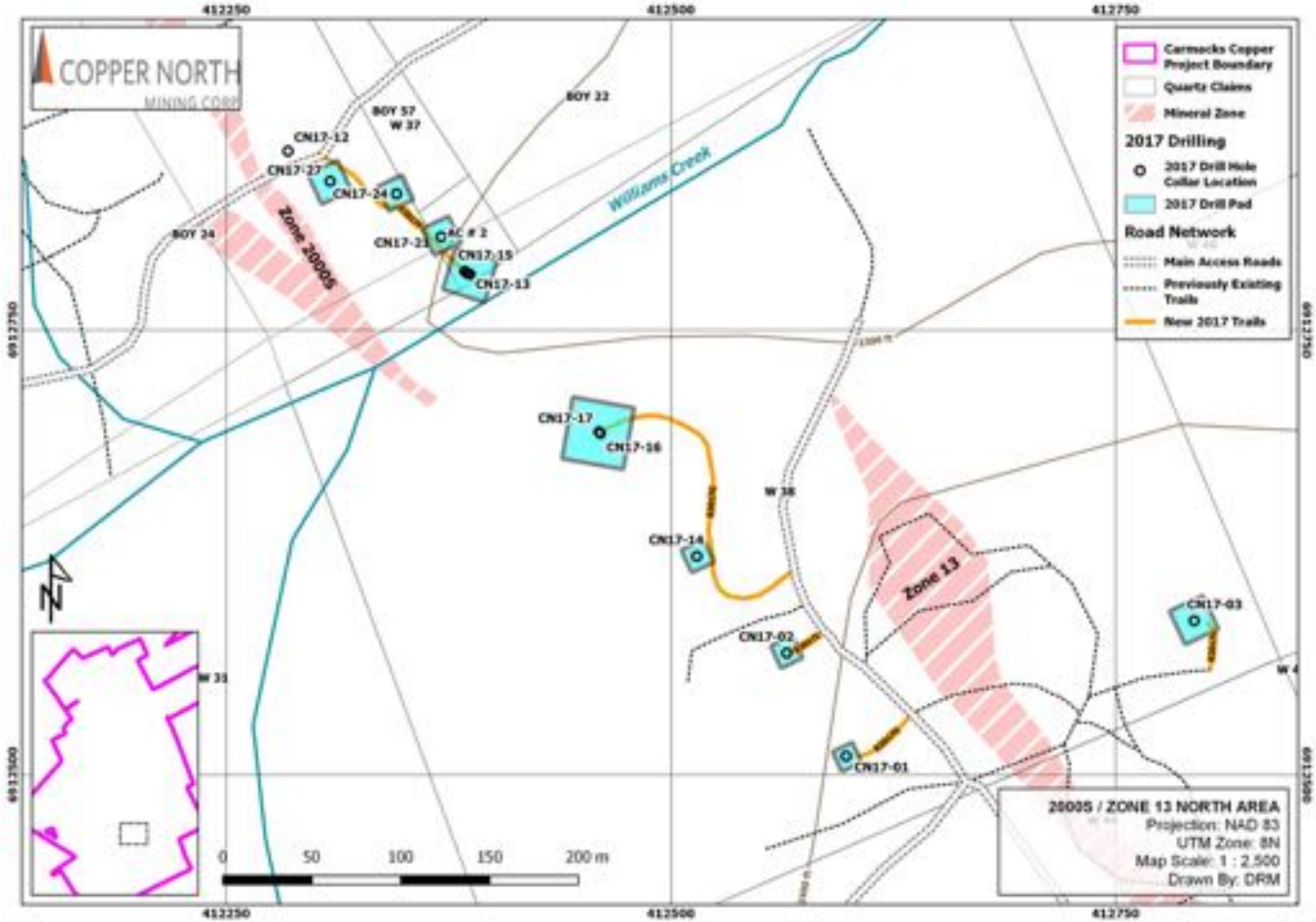

Figure 9. Carmacks Project – Zone 2000S/Zone 13 North Area, 2017 program trails and drill pads

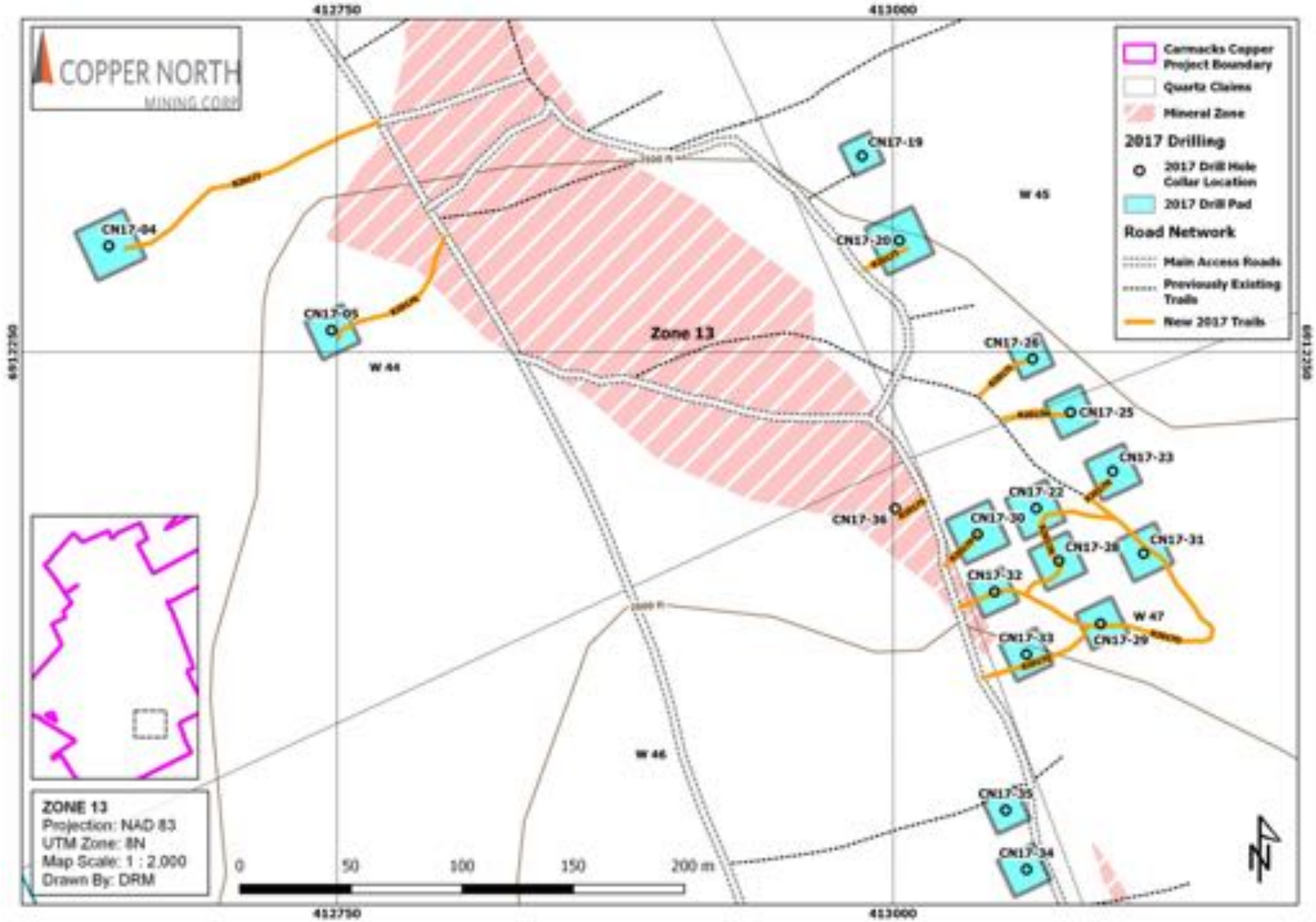

Figure 10. Carmacks Project – Zone 13, 2017 program trails and drill pads

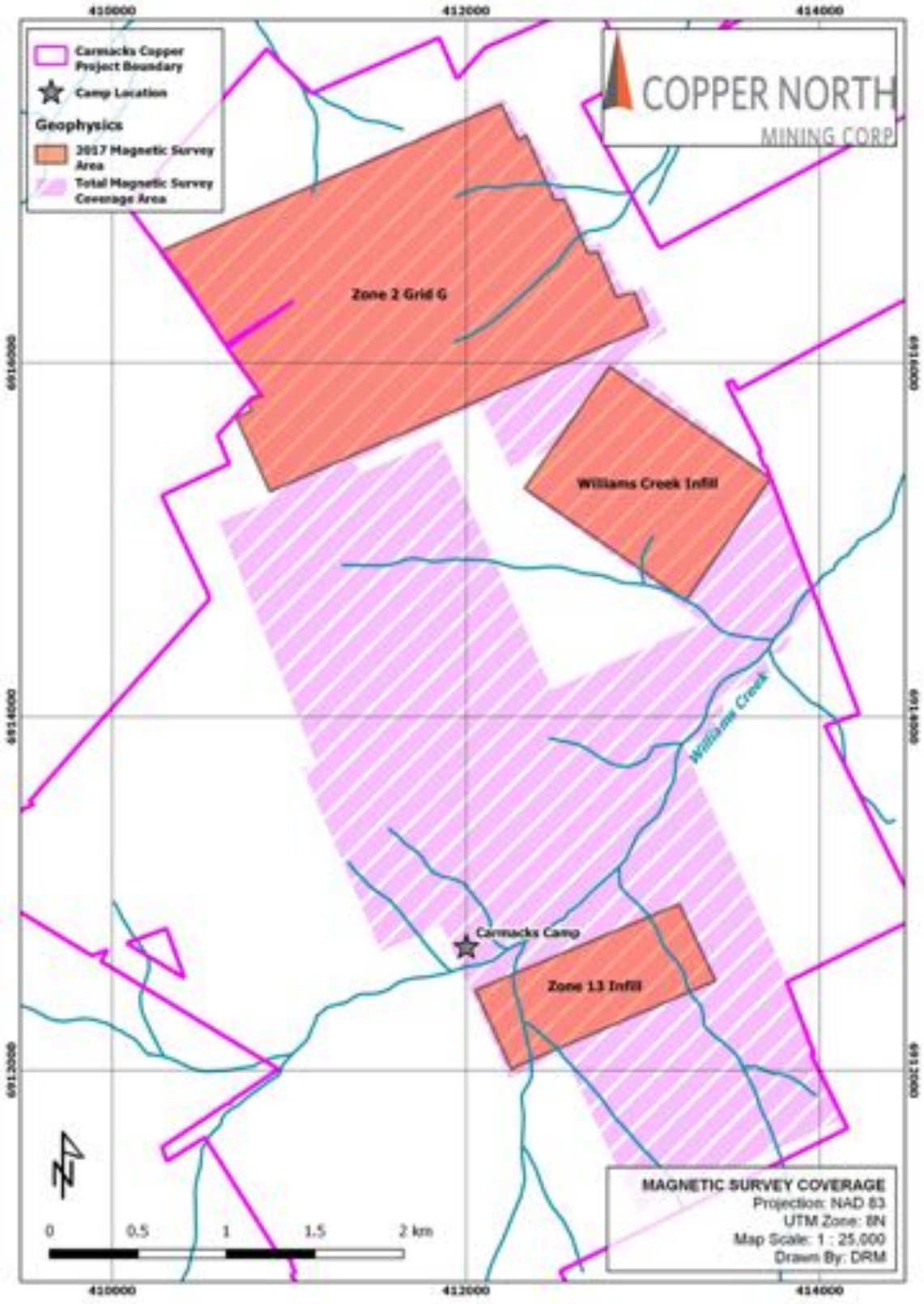

Figure 11. Carmacks Project – 2017 Magnetic Survey Areas Index

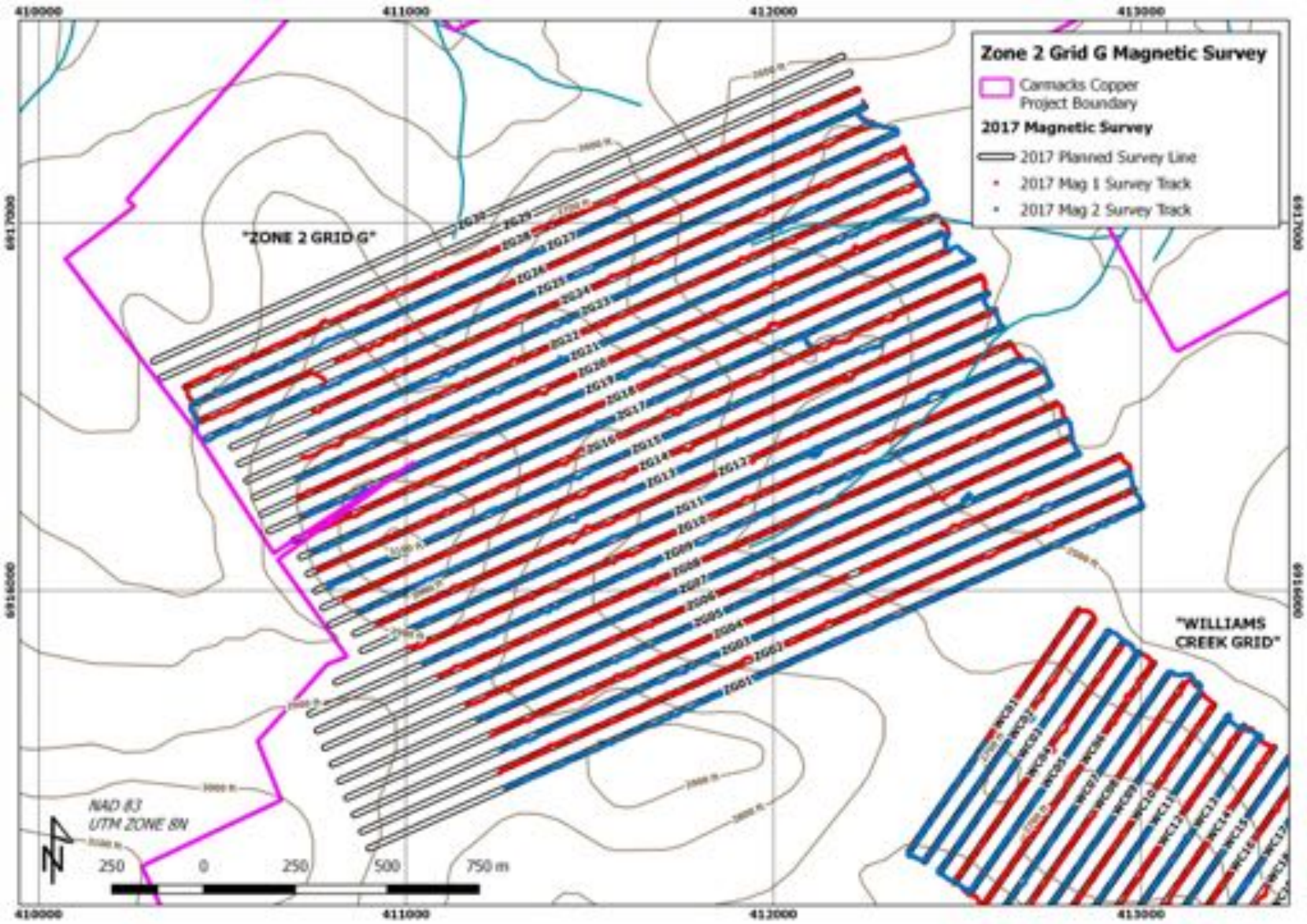

Figure 12. Carmacks Project – Zone 2 Grid G Magnetic Survey Plan

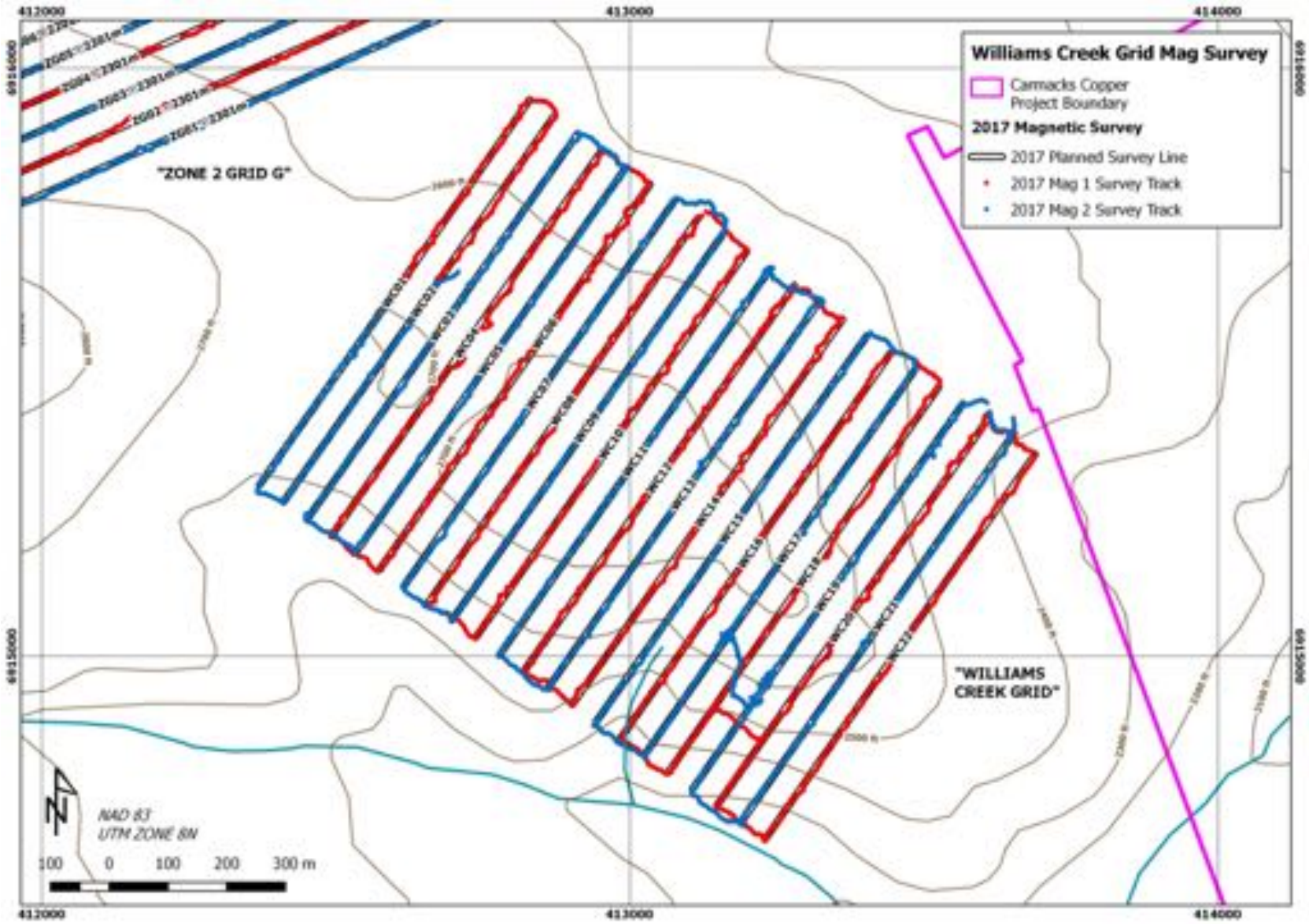

Figure 13. Carmacks Project – Williams Creek Grid Magnetic Survey Plan

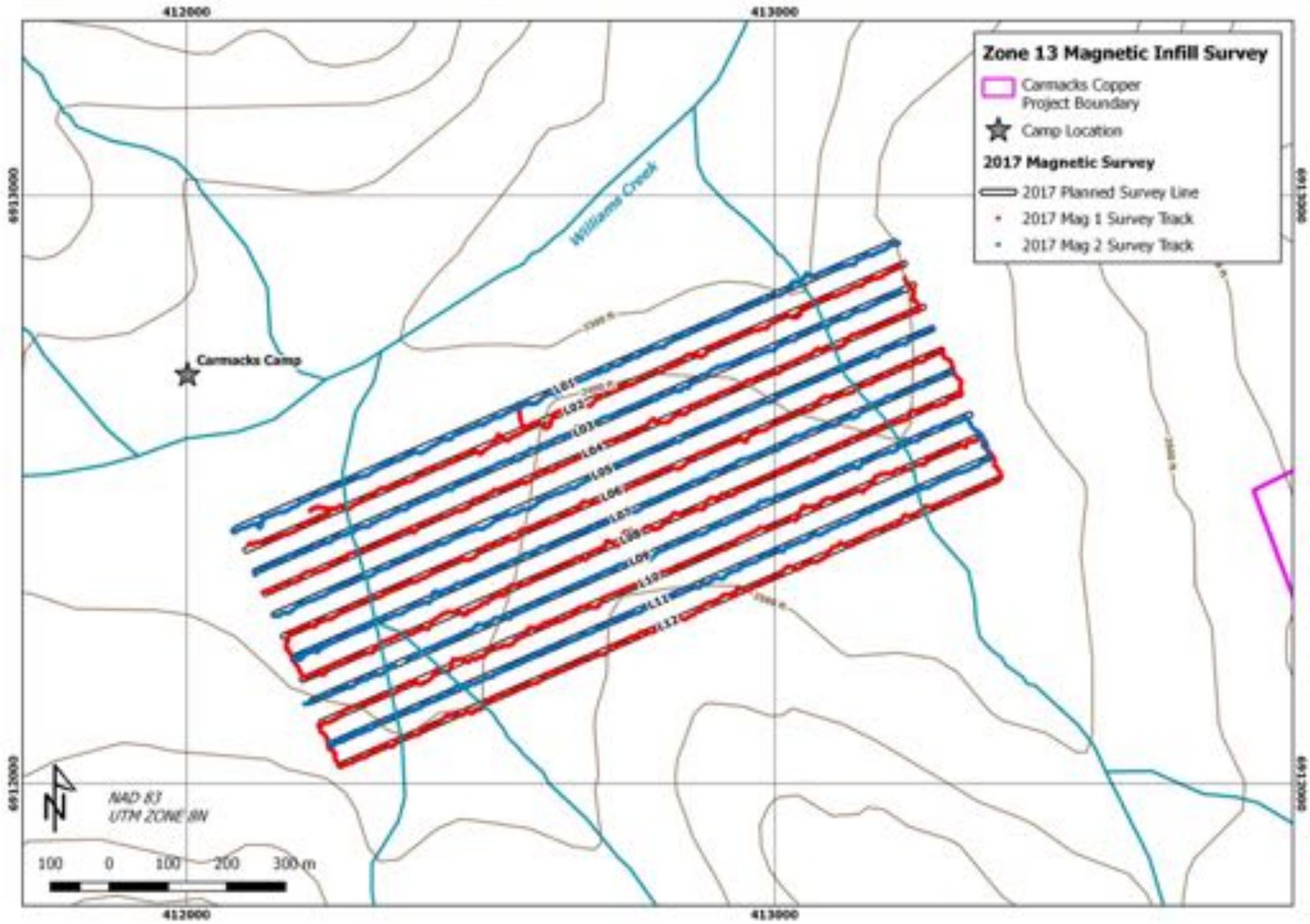

Figure 14. Carmacks Project – Zone 13 Grid Magnetic Survey Plan

6.0 CAMP LAYOUT

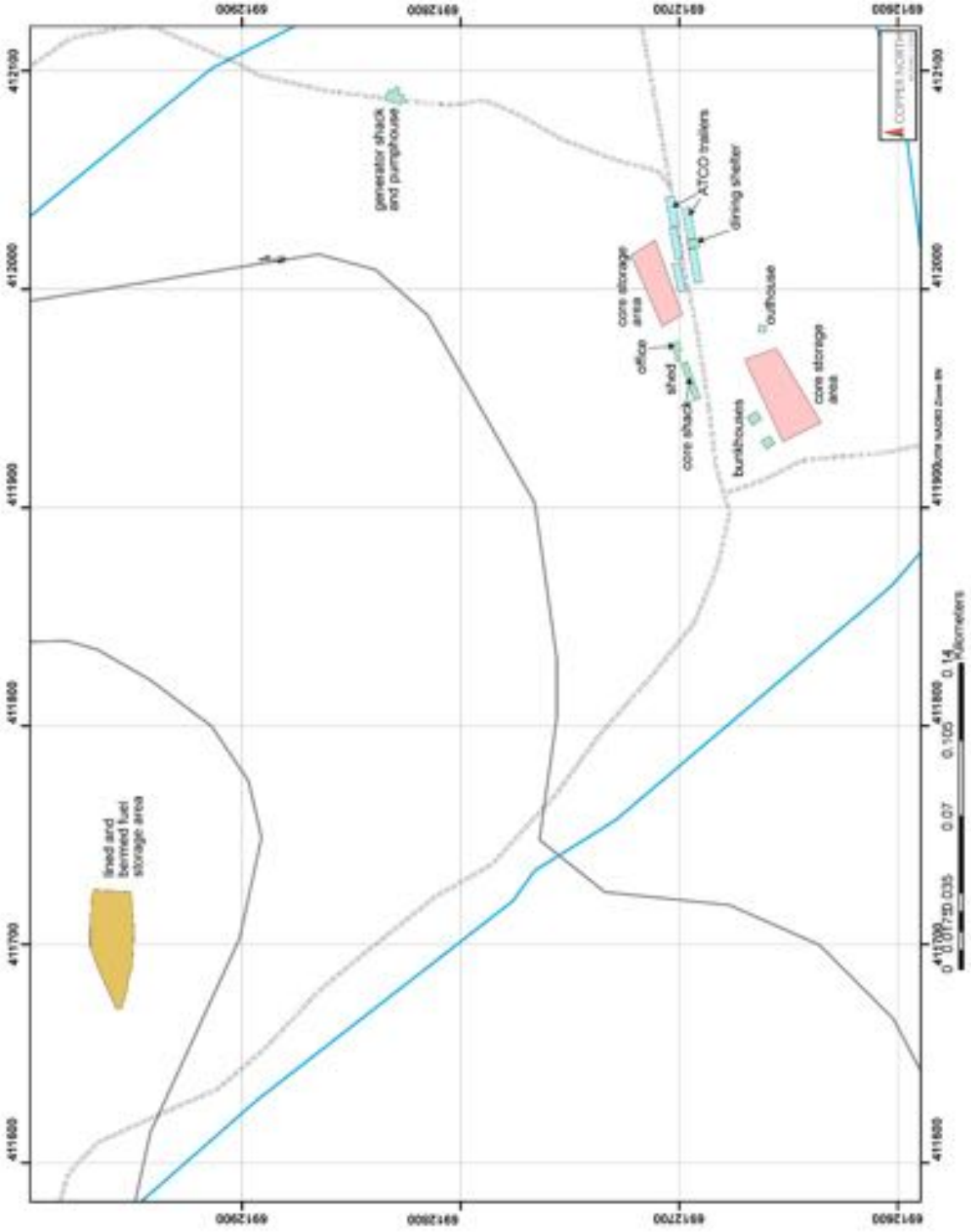

Figure 15. Carmacks Camp Layout.