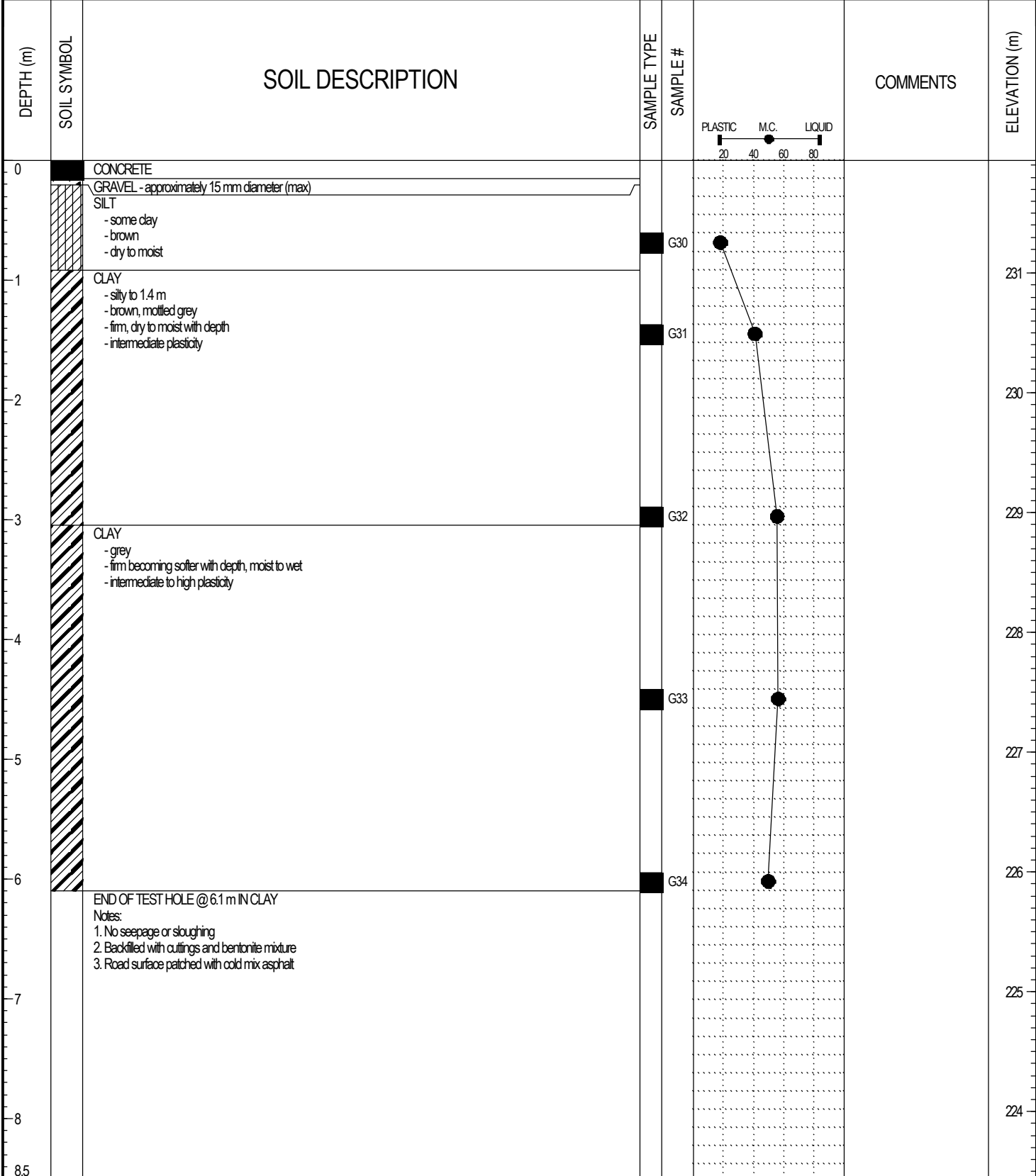


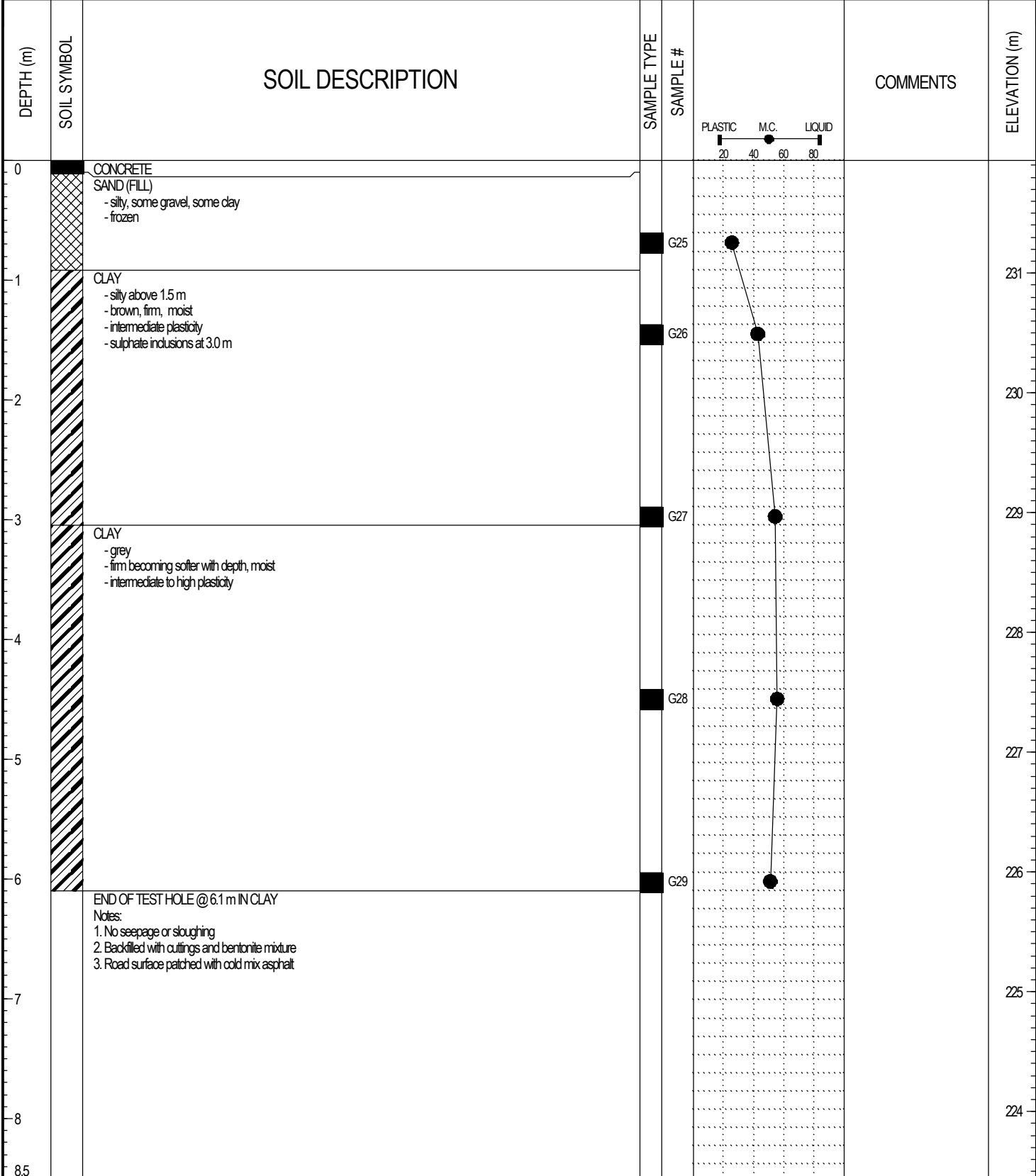
APPENDIX A
TEST HOLE LOGS

PROJECT: Alexander-Banatyne Combined Sewer - Contract 1B	CLIENT: City of Winnipeg - WWD	TESTHOLE NO: TH05-01
LOCATION: #254 Beacon Road, west side		PROJECT NO.: D265-177-01
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Brat 22 - 125 mm SS Augers	ELEVATION (m): 231.941
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK	<input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE



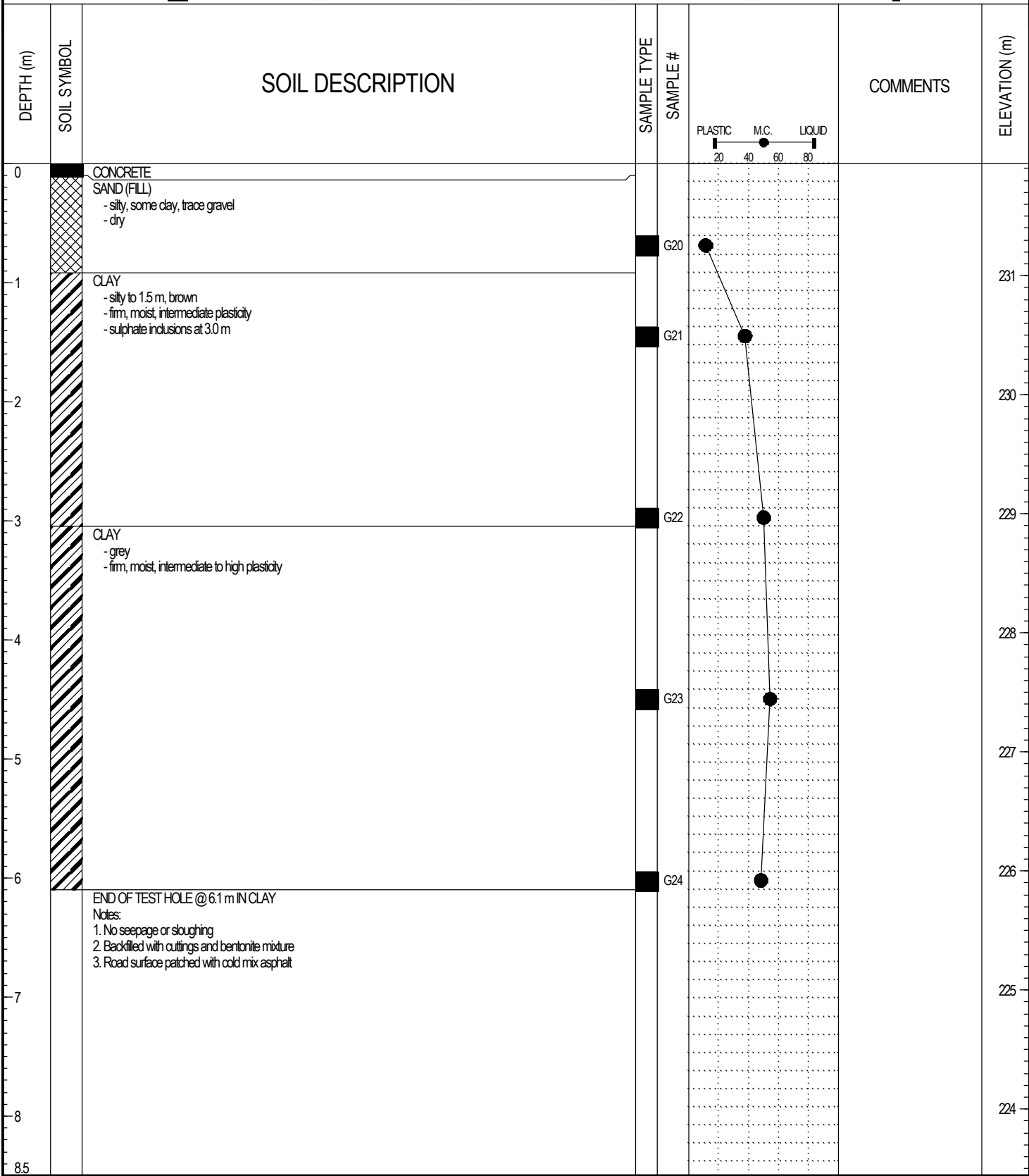
LOG OF TESTHOLE ALEXANDER BANNATYNE CONTRACT 1B.GPJ UMA.GDT 17/15/05

PROJECT: Alexander-Banatyne Combined Sewer - Contract 1B	CLIENT: City of Winnipeg - WWD	TESTHOLE NO: TH05-02
LOCATION: #857 Alexander, North side		PROJECT NO.: D265-177-01
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Brat 22 - 125 mm SS Augers	ELEVATION (m): 231.941
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	



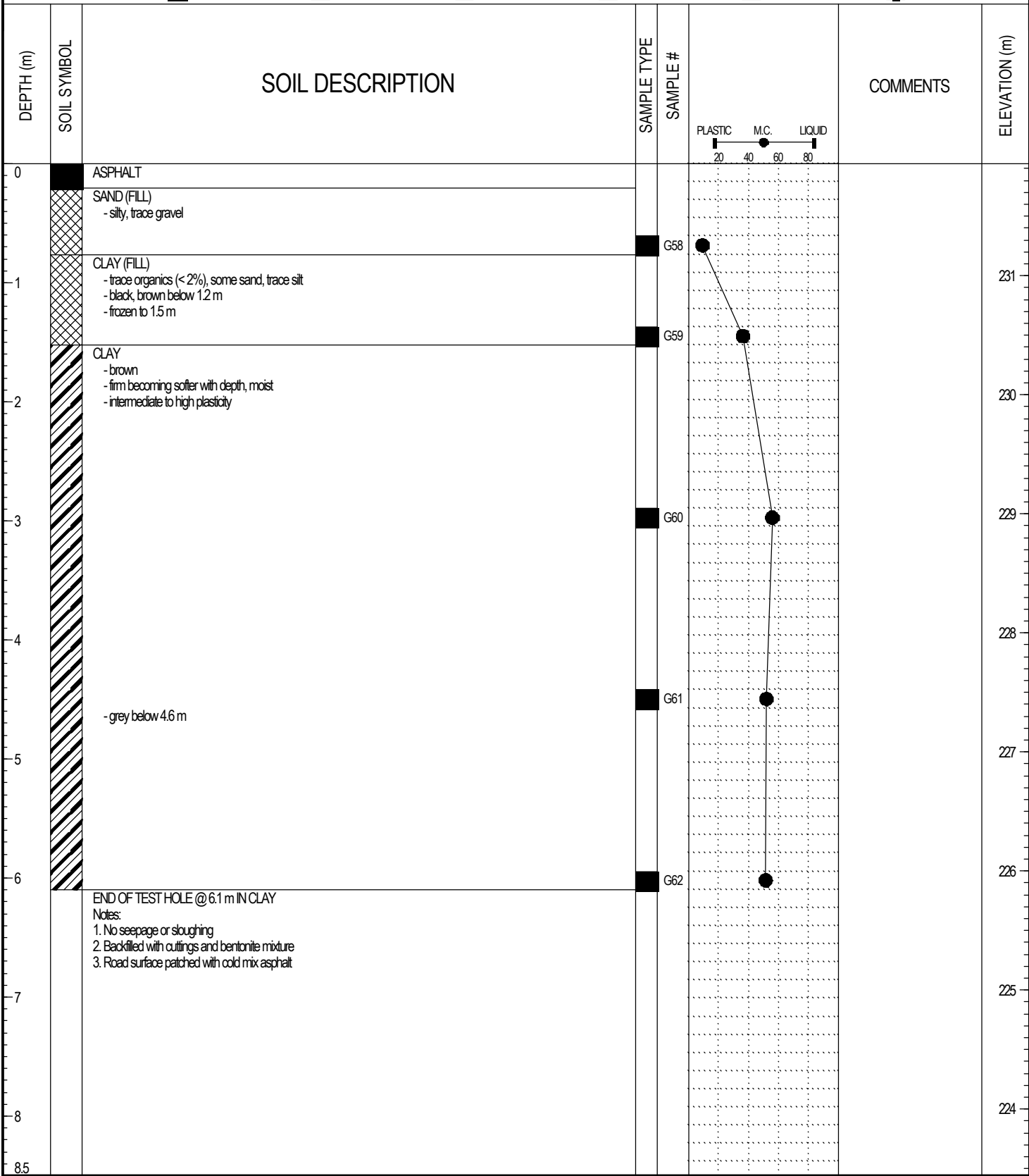
LOG OF TESTHOLE ALEXANDER BANNATYNE CONTRACT 1B.GPJ UMA.GDT 17/15/05

PROJECT: Alexander-Banatyne Combined Sewer - Contract 1B	CLIENT: City of Winnipeg - WWD	TESTHOLE NO: TH05-03
LOCATION: Corner of Tecumseh and Alexander, east side of Tecumseh		PROJECT NO.: D265-177-01
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Brat 22 - 125 mm SS Augers	ELEVATION (m): 231.941
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	



LOG OF TESTHOLE ALEXANDER BANNATYNE CONTRACT 1B.GPJ UMA.GDT 17/15/05

PROJECT: Alexander-Banatyne Combined Sewer - Contract 1B	CLIENT: City of Winnipeg - WWD	TESTHOLE NO: TH05-04
LOCATION: North end of City of Winnipeg Ross Avenue Yard adjacent to Alexander Street		PROJECT NO.: D265-177-01
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Brat 22 - 125 mm SS Augers	ELEVATION (m): 231.941
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	



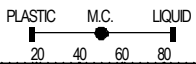
LOG OF TESTHOLE ALEXANDER BANNATYNE CONTRACT 1B.GPJ UMA.GDT 17/15/05

PROJECT: Alexander-Banatyne Combined Sewer - Contract 1B	CLIENT: City of Winnipeg - WWD	TESTHOLE NO: TH05-05
LOCATION: Corner of Tecumseh and Logan - SE corner		PROJECT NO.: D265-177-01
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Brat 22 - 125 mm SS Augers	ELEVATION (m): 232.191
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	

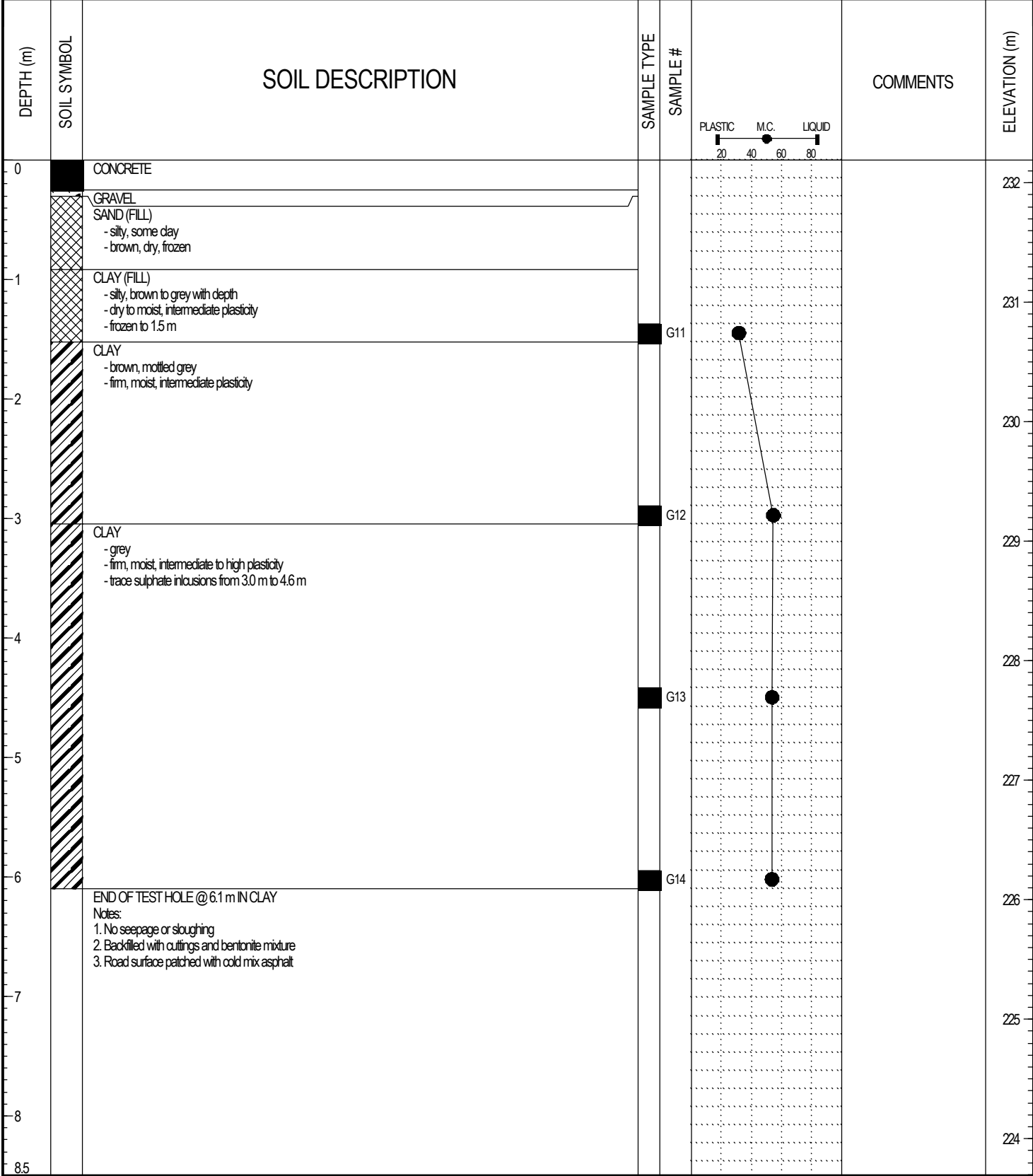
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	PLASTIC	M.C.	LIQUID	COMMENTS	ELEVATION (m)
0		CONCRETE							232
0		GRAVEL							
0		SAND (FILL) - silty, trace gravel (red to brown colour) - frozen		G15					
1		CLAY (FILL) - silty, brown, mottled grey - firm, moist - frozen to 1.5 m		G16					231
2		CLAY - brown - firm, moist, intermediate plasticity - strong hydrocarbon odor and staining from 2.3 m to 3.0 m		G17					230
3		CLAY - grey - firm, moist, intermediate plasticity		G18					229
4				G19					228
5									227
6									226
7									225
8									224
8.5									

LOG OF TESTHOLE ALEXANDER BANNATYNE CONTRACT 1B.GPJ UMA.GDT 17/15/05

END OF TEST HOLE @ 6.1 m IN CLAY
Notes:
1. No seepage or sloughing
2. Backfilled with cuttings and bentonite mixture
3. Road surface patched with cold mix asphalt

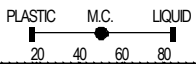


PROJECT: Alexander-Banatyne Combined Sewer - Contract 1B	CLIENT: City of Winnipeg - WWD	TESTHOLE NO: TH05-06
LOCATION: #297 Tecumseh		PROJECT NO.: D265-177-01
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Brat 22 - 125 mm SS Augers	ELEVATION (m): 232.191
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input checked="" type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	

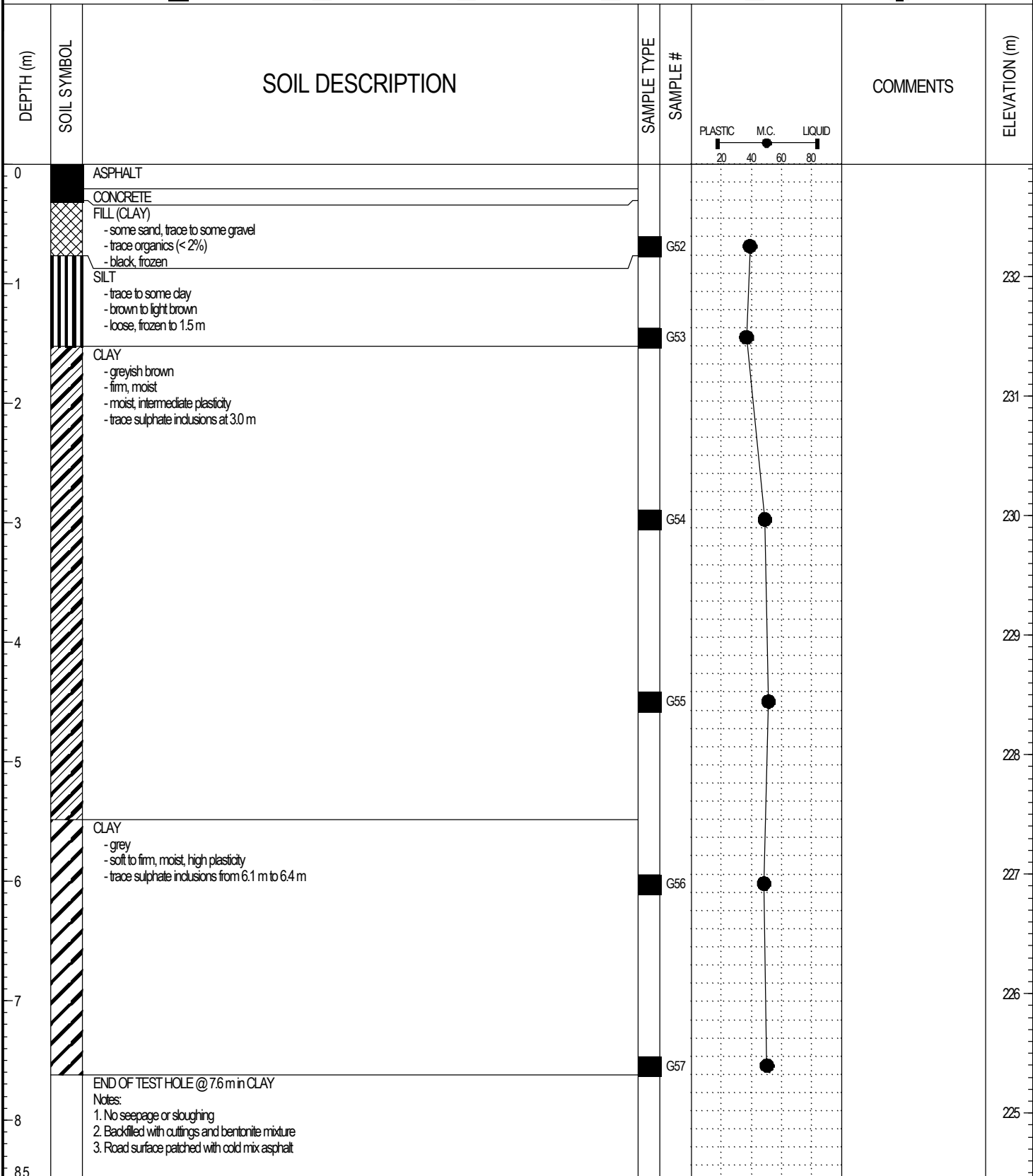


LOG OF TESTHOLE ALEXANDER BANNATYNE CONTRACT 1B.GPJ UMA.GDT 17/15/05

END OF TEST HOLE @ 6.1 m IN CLAY
Notes:
1. No seepage or sloughing
2. Backfilled with cuttings and bentonite mixture
3. Road surface patched with cold mix asphalt



PROJECT: Alexander-Banatyne Combined Sewer - Contract 1B	CLIENT: City of Winnipeg - WWD	TESTHOLE NO: TH05-07
LOCATION: City of Winnipeg Ross Ave. Yard, directly west of Pacific Avenue		PROJECT NO.: D265-177-01
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Brat 22 - 125 mm SS Augers	ELEVATION (m): 232.94
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	



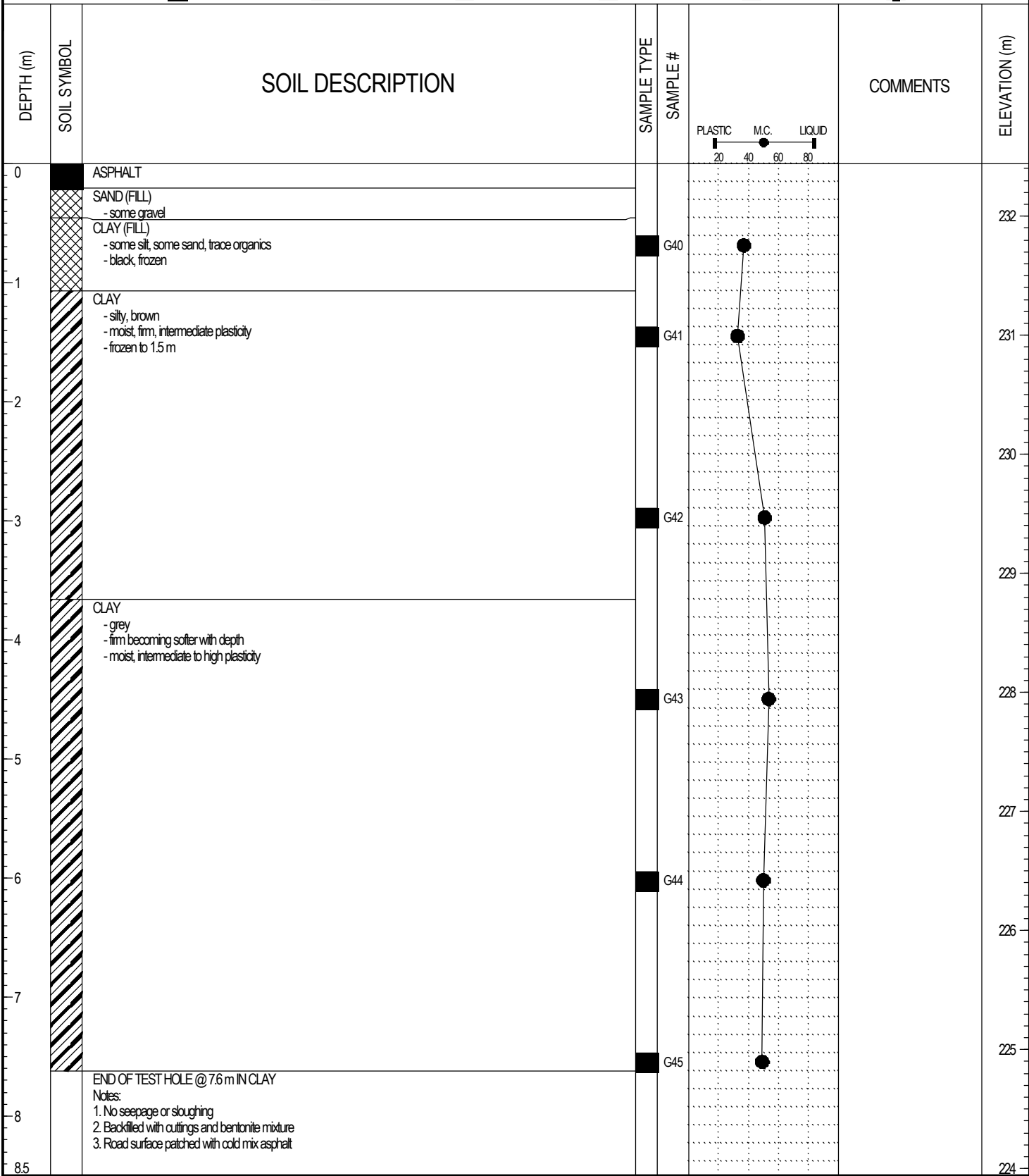
LOG OF TESTHOLE ALEXANDER BANNATYNE CONTRACT 1B.GPJ UMA.GDT 17/15/05

PROJECT: Alexander-Banatyne Combined Sewer - Contract 1B	CLIENT: City of Winnipeg - WWD	TESTHOLE NO: TH05-08
LOCATION: City of Winnipeg Ross Ave. Yard, directly west of Ross Avenue		PROJECT NO.: D265-177-01
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Brat 22 - 125 mm SS Augers	ELEVATION (m): 232.94
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	PLASTIC	M.C.	LIQUID	COMMENTS	ELEVATION (m)
0		ASPHALT							
0 - 0.5		CLAY (FILL) - some silt - trace organics, black		G46					232
0.5 - 1.5		CLAY - some silt - brown, dry, frozen		G47					231
1.5 - 6.0		CLAY - brown to grey with depth, mottled grey below 5.8 m - firm, moist, intermediate plasticity		G48					230
6.0 - 7.6		CLAY - grey - firm becoming softer with depth - moist to wet, intermediate to high plasticity		G49					229
7.6 - 8.5		CLAY - grey - firm becoming softer with depth - moist to wet, intermediate to high plasticity		G50					228
8.5		CLAY - grey - firm becoming softer with depth - moist to wet, intermediate to high plasticity		G51					227
8.5		END OF TEST HOLE @ 7.6 m IN CLAY Notes: 1. No seepage or sloughing 2. Backfilled with cuttings and bentonite mixture 3. Road surface patched with cold mix asphalt							226
8.5									225

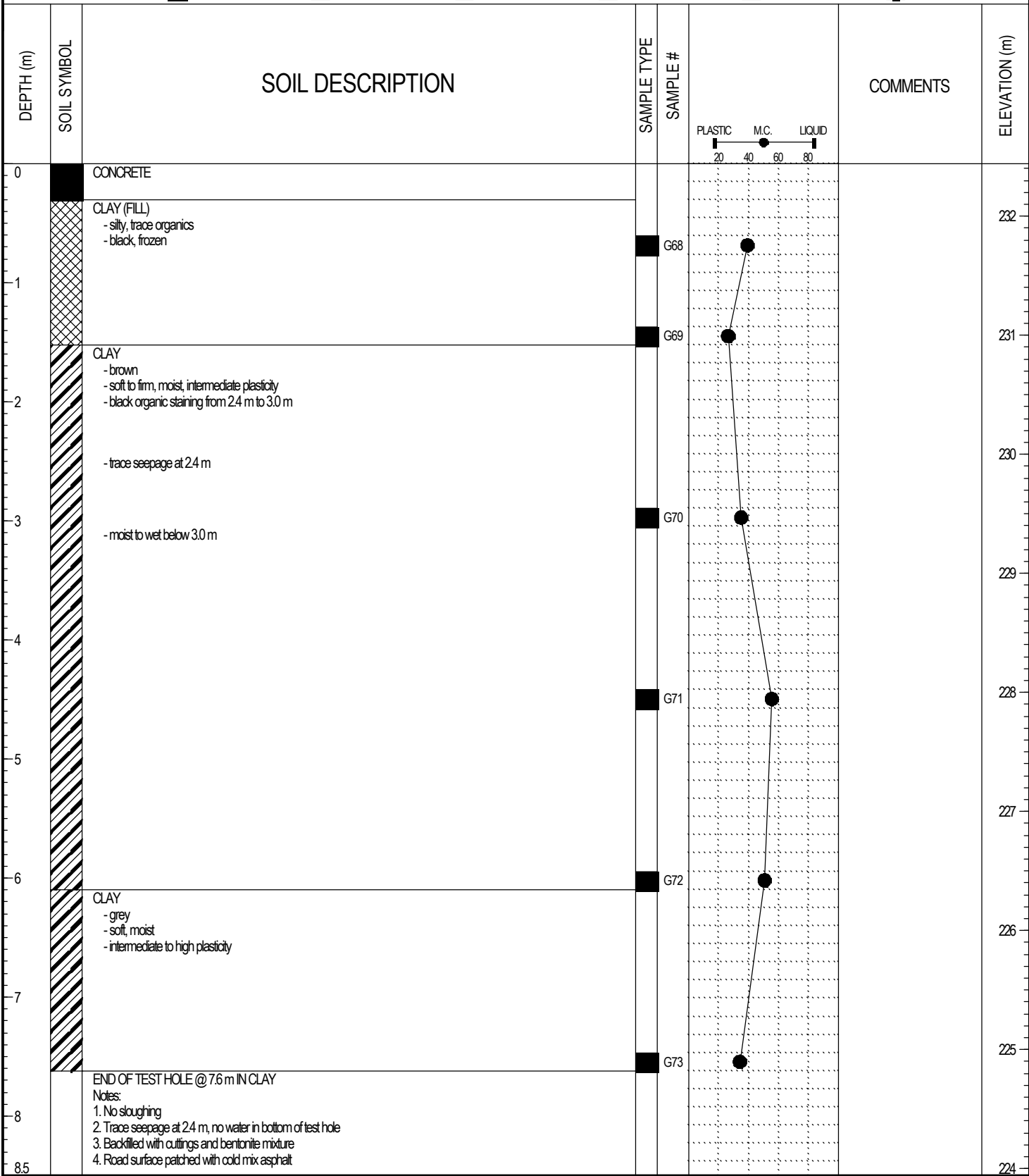
LOG OF TESTHOLE ALEXANDER BANNATYNE CONTRACT 1B.GPJ UMA.GDT 17/15/05

PROJECT: Alexander-Banatyne Combined Sewer - Contract 1B	CLIENT: City of Winnipeg - WWD	TESTHOLE NO: TH05-09
LOCATION: City of Winnipeg Ross Yard - Intersection of Tecumseh St and Elgin Ave		PROJECT NO.: D265-177-01
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Brat 22 - 125 mm SS Augers	ELEVATION (m): 232.44
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	



LOG OF TESTHOLE ALEXANDER BANNATYNE CONTRACT 1B.GPJ UMA.GDT 17/15/05

PROJECT: Alexander-Banatyne Combined Sewer - Contract 1B	CLIENT: City of Winnipeg - WWD	TESTHOLE NO: TH05-10
LOCATION: # 774 Pacific Avenue - South sidewalk		PROJECT NO.: D265-177-01
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Brat 22 - 125 mm SS Augers	ELEVATION (m): 232.44
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	



LOG OF TESTHOLE ALEXANDER BANNATYNE CONTRACT 1B.GPJ UMA.GDT 17/15/05

PROJECT: Alexander-Banatyne Combined Sewer - Contract 1B	CLIENT: City of Winnipeg - WWD	TESTHOLE NO: TH05-11
LOCATION: # 767 Ross Avenue - South side of Street		PROJECT NO.: D265-177-01
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Brat 22 - 125 mm SS Augers	ELEVATION (m): 232.191
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	PLASTIC	M.C.	LIQUID	COMMENTS	ELEVATION (m)
0	CONCRETE								232
	GRAVEL	- reddish brown, approx. 15 mm diameter (max)							
	CLAY (FILL)	- silty, trace organics - black to brown with depth - firm, dry to moist, frozen to 1.5 m	GRAB	G63					
1									231
	CLAY	- greyish brown - firm - moist, intermediate plasticity - mottled grey from 2.7 m to 3.0 m	GRAB	G64					
2									230
	CLAY	- grey - firm becoming softer with depth - moist, intermediate to high plasticity	GRAB	G65					
3									229
									228
									227
									226
									225
									224
6		END OF TEST HOLE @ 6.1 m IN CLAY	GRAB	G66					
7		Notes: 1. No seepage or sloughing 2. Backfilled with cuttings and bentonite mixture 3. Road surface patched with cold mix asphalt							
8									
8.5									

LOG OF TESTHOLE ALEXANDER BANNATYNE CONTRACT 1B.GPJ UMA.GDT 17/15/05

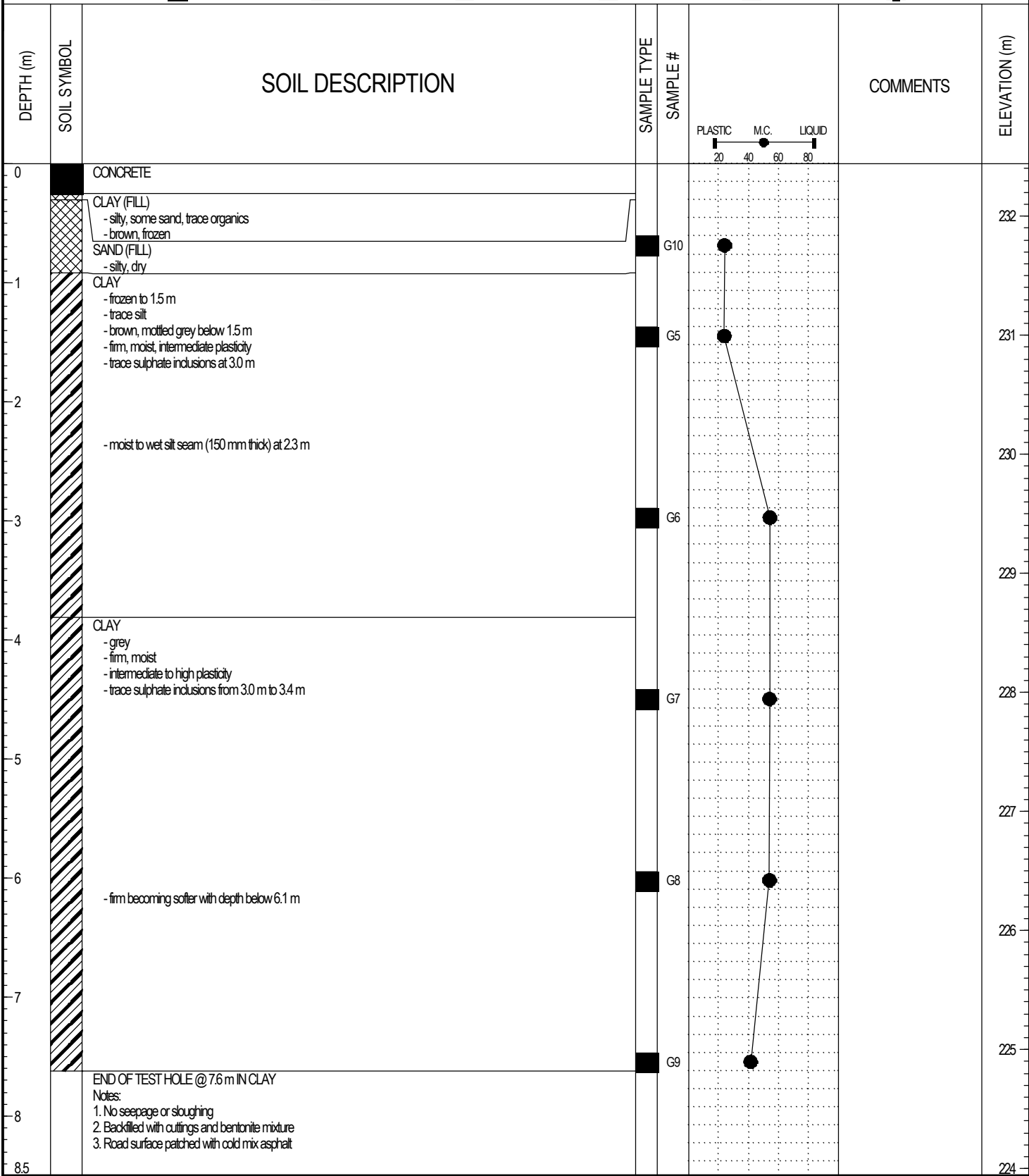
PROJECT: Alexander-Banatyne Combined Sewer - Contract 1B	CLIENT: City of Winnipeg - WWD	TESTHOLE NO: TH05-12
LOCATION: NE Corner of Logan and Sherman St.		PROJECT NO.: D265-177-01
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Brat 22 - 125 mm SS Augers	ELEVATION (m): 232.191
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	PLASTIC	M.C.	LIQUID	COMMENTS	ELEVATION (m)
0	■	CONCRETE							232
	▨	CLAY (FILL)- trace organics, black, frozen SAND (FILL) - some clay, some silt, trace organics - black to brown with depth, frozen							
1	▨	CLAY - some silt, trace sand - brown, frozen	■	G1					231
2	▨	CLAY - silty, brown - firm - moist, intermediate plasticity							230
3	▨	CLAY - grey - firm becoming softer with depth - moist to wet, high plasticity	■	G2					229
4	▨	CLAY - grey - firm becoming softer with depth - moist to wet, high plasticity	■	G3					228
5	▨	- oxidation staining at 4.6 m							227
6	▨	END OF TEST HOLE @ 6.1 m IN CLAY Notes: 1. No seepage or sloughing 2. Backfilled with cuttings and bentonite mixture 3. Road surface patched with cold mix asphalt	■	G4					226
7									225
8									224
8.5									

LOG OF TESTHOLE ALEXANDER BANNATYNE CONTRACT 1B.GPJ UMA.GDT 17/15/05

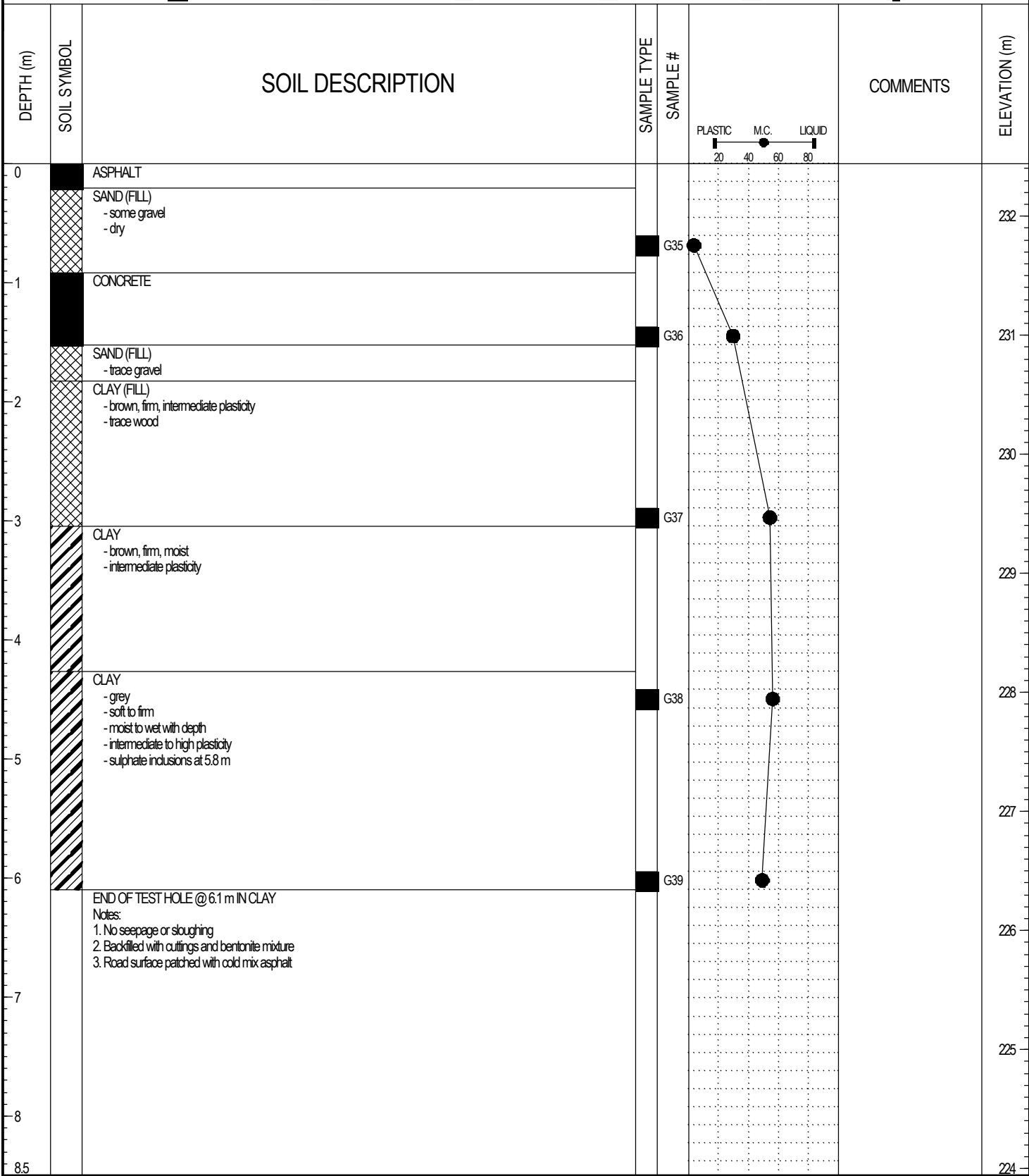
	LOGGED BY: Lee Peters	COMPLETION DEPTH: 6.10 m
	REVIEWED BY: Gil Robinson	COMPLETION DATE: 3/3/05
	PROJECT ENGINEER: Gil Robinson	Page 1 of 1

PROJECT: Alexander-Banatyne Combined Sewer - Contract 1B	CLIENT: City of Winnipeg - WWD	TESTHOLE NO: TH05-13
LOCATION: In Between # 292 and # 286 Sherman St.		PROJECT NO.: D265-177-01
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Brat 22 - 125 mm SS Augers	ELEVATION (m): 232.44
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	



LOG OF TESTHOLE ALEXANDER BANNATYNE CONTRACT 1B.GPJ UMA.GDT 17/15/05

PROJECT: Alexander-Banatyne Combined Sewer - Contract 1B	CLIENT: City of Winnipeg - WWD	TESTHOLE NO: TH05-14
LOCATION: SW corner of Elgin Ave and Tecumseh inside City of Winnipeg Ross Ave Yard		PROJECT NO.: D265-177-01
CONTRACTOR: Paddock Drilling Ltd.	METHOD: Brat 22 - 125 mm SS Augers	ELEVATION (m): 232.44
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	



LOG OF TESTHOLE ALEXANDER BANNATYNE CONTRACT 1B.GPJ UMA.GDT 17/15/05