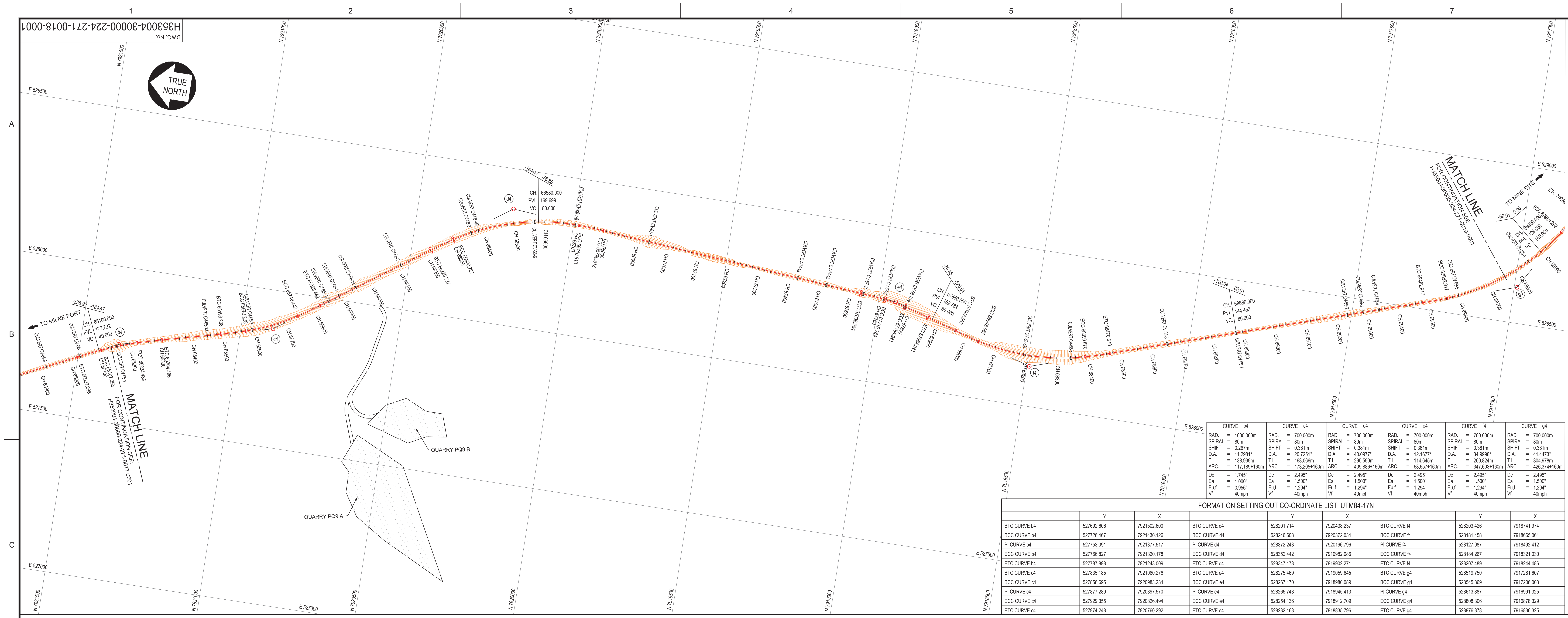
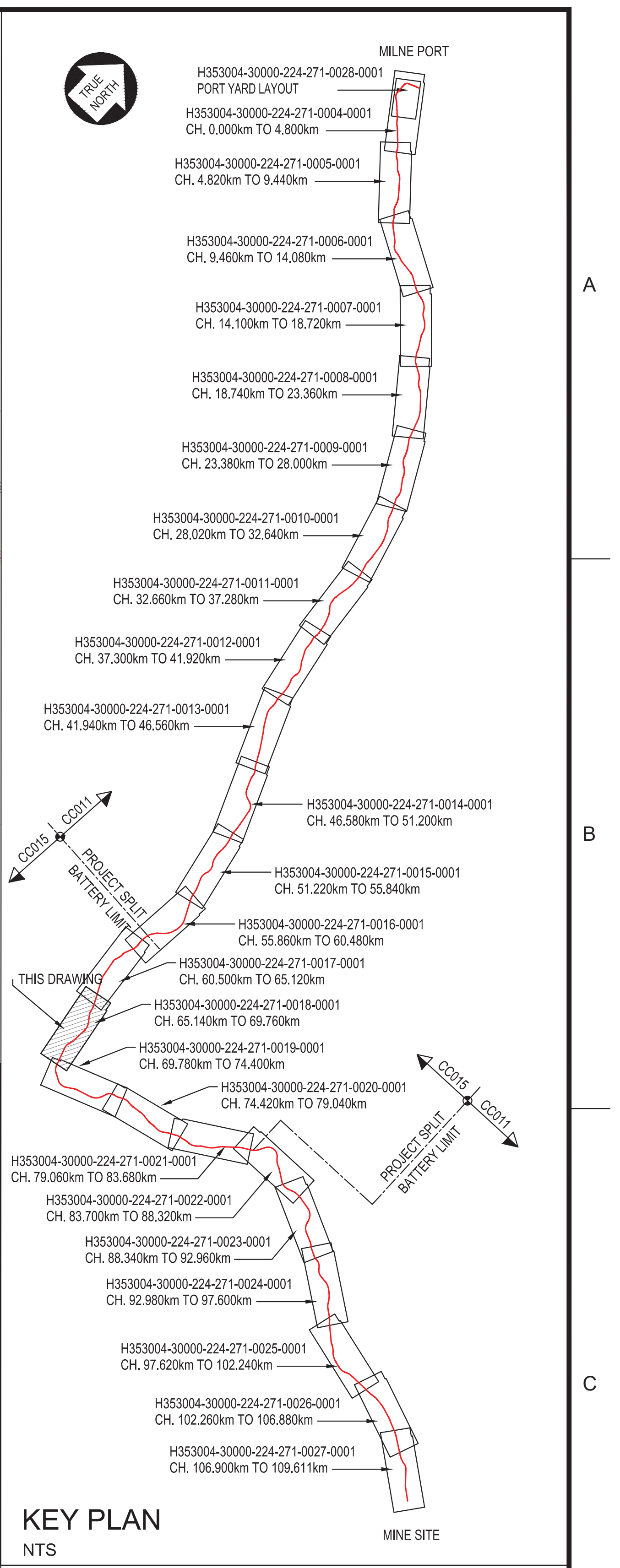
DWG. No. H353004-30000-224-271-0018-0001


TRUE NORTH
TO MILNE PORT
MATCH LINE
FOR CONTINUATION SEE:
H353004-30000-224-271-0017-0001
MATCH LINE
FOR CONTINUATION SEE:
H353004-30000-224-271-0019-0001
TO MINE SITE
QUARRY PQ9 A
QUARRY PQ9 B
E 528500
E 528000
E 527500
E 527000
E 529000
N 7921500
N 7921000
N 7920500
N 7920000
N 7919500
N 7919000
N 7918500
N 7918000
N 7917500
N 7917000

CURVE b4	CURVE c4	CURVE d4	CURVE e4	CURVE f4	CURVE g4
RAD. = 1000.000m	RAD. = 700.000m	RAD. = 700.000m	RAD. = 700.000m	RAD. = 700.000m	RAD. = 700.000m
SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m
SHIFT = 0.267m	SHIFT = 0.381m	SHIFT = 0.381m	SHIFT = 0.381m	SHIFT = 0.381m	SHIFT = 0.381m
D.A. = 11.2981°	D.A. = 20.7251°	D.A. = 40.0977°	D.A. = 12.1677°	D.A. = 34.9998°	D.A. = 41.4473°
T.L. = 138.939m	T.L. = 168.066m	T.L. = 295.590m	T.L. = 114.645m	T.L. = 260.824m	T.L. = 304.978m
ARC. = 117.189+160m	ARC. = 173.205+160m	ARC. = 409.886+160m	ARC. = 68.657+160m	ARC. = 347.603+160m	ARC. = 426.374+160m
Dc = 1.745"	Dc = 2.495"	Dc = 2.495"	Dc = 2.495"	Dc = 2.495"	Dc = 2.495"
Ea = 1.000"	Ea = 1.500"	Ea = 1.500"	Ea = 1.500"	Ea = 1.500"	Ea = 1.500"
Eu,f = 0.956"	Eu,f = 1.294"	Eu,f = 1.294"	Eu,f = 1.294"	Eu,f = 1.294"	Eu,f = 1.294"
Vf = 40mph	Vf = 40mph	Vf = 40mph	Vf = 40mph	Vf = 40mph	Vf = 40mph

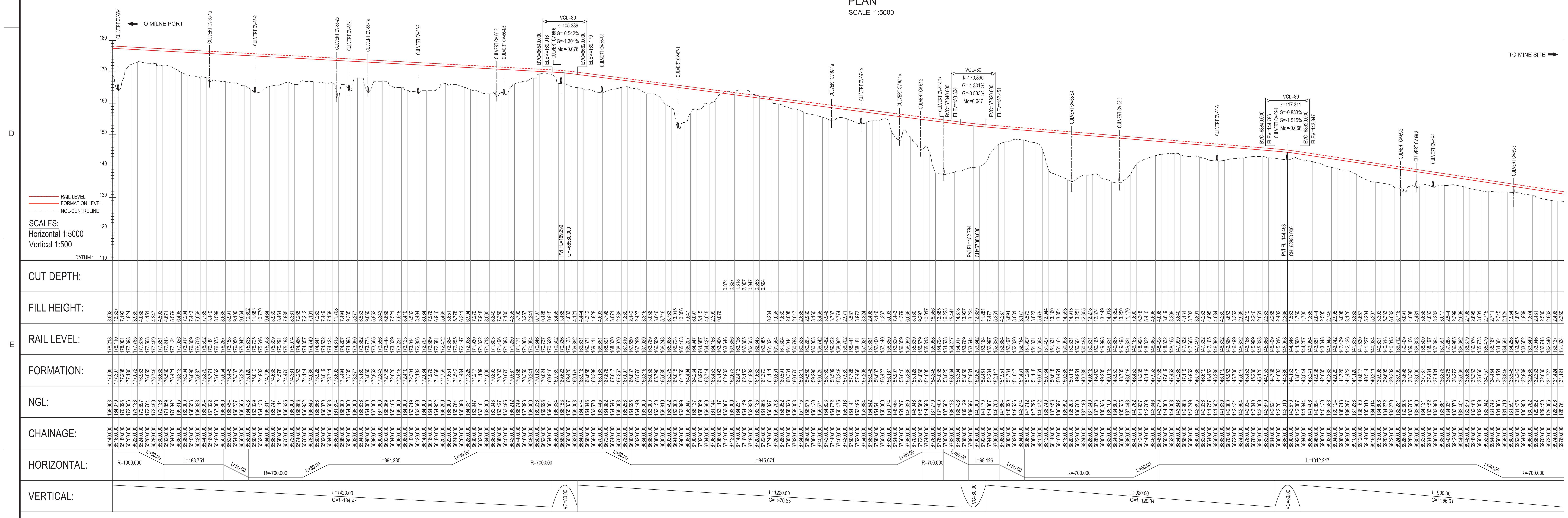
FORMATION SETTING OUT CO-ORDINATE LIST UTM84-17N

	Y	X		Y	X		Y	X
BTC CURVE b4	527692.606	7921502.600	BTC CURVE d4	528201.714	7920438.237	BTC CURVE f4	528203.426	7918741.974
BCC CURVE b4	527726.467	7921430.126	BCC CURVE d4	528246.608	7920372.034	BCC CURVE f4	528181.458	7918665.061
PI CURVE b4	527753.091	7921377.517	PI CURVE d4	528372.243	7920196.796	PI CURVE f4	528127.087	7918492.412
ECC CURVE b4	527766.827	7921320.178	ECC CURVE d4	528352.442	7919982.086	ECC CURVE f4	528184.267	7918321.030
ETC CURVE b4	527787.898	7921243.009	ETC CURVE d4	528347.178	7919902.271	ETC CURVE f4	528207.489	7918244.486
BTC CURVE c4	527835.185	7921060.276	BTC CURVE e4	528275.469	7919059.645	BTC CURVE g4	528519.750	7917281.607
BCC CURVE c4	527856.695	7920983.234	BCC CURVE e4	528267.170	7918980.089	BCC CURVE g4	528545.869	7917206.003
PI CURVE c4	527877.289	7920897.570	PI CURVE e4	528265.748	7918945.413	PI CURVE g4	528613.887	7916991.325
ECC CURVE c4	527929.355	7920826.494	ECC CURVE e4	528254.136	7918912.709	ECC CURVE g4	528808.306	7916878.329
ETC CURVE c4	527974.248	7920760.292	ETC CURVE e4	528232.168	7918835.796	ETC CURVE g4	528876.378	7916836.325


TRUE NORTH
MILNE PORT
H353004-30000-224-271-0028-0001
PORT YARD LAYOUT
H353004-30000-224-271-0004-0001
CH. 0.000km TO 4.800km
H353004-30000-224-271-0005-0001
CH. 4.820km TO 9.440km
H353004-30000-224-271-0006-0001
CH. 9.460km TO 14.080km
H353004-30000-224-271-0007-0001
CH. 14.100km TO 18.720km
H353004-30000-224-271-0008-0001
CH. 18.740km TO 23.360km
H353004-30000-224-271-0009-0001
CH. 23.380km TO 28.000km
H353004-30000-224-271-0010-0001
CH. 28.020km TO 32.640km
H353004-30000-224-271-0011-0001
CH. 32.660km TO 37.280km
H353004-30000-224-271-0012-0001
CH. 37.300km TO 41.920km
H353004-30000-224-271-0013-0001
CH. 41.940km TO 46.560km
H353004-30000-224-271-0014-0001
CH. 46.580km TO 51.200km
H353004-30000-224-271-0015-0001
CH. 51.220km TO 55.840km
H353004-30000-224-271-0016-0001
CH. 55.860km TO 60.480km
H353004-30000-224-271-0017-0001
CH. 60.500km TO 65.120km
THIS DRAWING
H353004-30000-224-271-0018-0001
CH. 65.140km TO 69.760km
H353004-30000-224-271-0019-0001
CH. 69.780km TO 74.400km
H353004-30000-224-271-0020-0001
CH. 74.420km TO 79.040km
H353004-30000-224-271-0021-0001
CH. 79.060km TO 83.680km
H353004-30000-224-271-0022-0001
CH. 83.700km TO 88.320km
H353004-30000-224-271-0023-0001
CH. 88.340km TO 92.960km
H353004-30000-224-271-0024-0001
CH. 92.980km TO 97.600km
H353004-30000-224-271-0025-0001
CH. 97.620km TO 102.240km
H353004-30000-224-271-0026-0001
CH. 102.260km TO 106.880km
H353004-30000-224-271-0027-0001
CH. 106.900km TO 109.611km
CC015
CC011
PROJECT SPLIT
BATTERY LIMIT
MINE SITE

KEY PLAN
NTS

PLAN
SCALE 1:5000


TO MILNE PORT
TO MINE SITE
RAIL LEVEL
FORMATION LEVEL
NGL-CENTRELINE
SCALES:
Horizontal 1:5000
Vertical 1:500
DATUM : 110
CUT DEPTH:
FILL HEIGHT:
RAIL LEVEL:
FORMATION:
NGL:
CHAINAGE:
HORIZONTAL:
VERTICAL:
VCL=80
k=105.389
VCL=80
k=170.895
VCL=80
k=117.311
R=1000.000
R=-700.000
R=700.000
L=1420.00
G=1:-184.47
L=1220.00
G=1:-76.85
L=920.00
G=1:-120.04
L=900.00
G=1:-66.01
VC=80.00

LONGITUDINAL SECTION

LEGEND :

▣ = APPROVED WATER SOURCES

▨ = MASSIVE ICE FORMATION

NOTE :

1. EARTHWORKS FOOTPRINT DOES NOT INDICATE EXTENT OF FORMATION WIDENING AROUND CURVES WHERE APPLICABLE (REFER TO TYPICAL DRAWINGS) .

2. START / END DEVIATION REFER TO RAIL ALIGNMENT EXTENDING BEYOND EXISTING PERMITTING AREA BOUNDARIES.

3. CO-ORDINATE SYSTEM: WGS 1984 UTM, ZONE 17 NORTH, METER

4. ALL DIMENSIONS SHOWN ARE IN METERS, UNLESS OTHERWISE SPECIFIED.

5. THIS DRAWING WAS PREVIOUSLY ISSUED AS:
H353004-00000-224-272-0018 -0001

6. FORMATION = TOP OF SUBGRADE.

7. CURVE DATA BELOW THE LINE IS IN IMPERIAL UNITS (IU).

PERMIT TO PRACTICE
HATCH LTD.
Signature ______
Date ______
PERMIT NUMBER: P 512
The Association of Professional Engineers, Geologists and Geophysicists of NWT/NU

DRAWING No.	DRAWING TITLE
H353004-30000-224-271-0019-0001	LINE PLAN AND LONGITUDINAL SECTION CH. 69+780 TO CH. 74+400
H353004-30000-224-271-0017-0001	LINE PLAN AND LONGITUDINAL SECTION CH. 60+500 TO CH. 65+120

REFERENCE DRAWINGS

REG. PROFESSIONAL

NOT FOR CONSTRUCTION

THIS DRAWING WAS PREPARED BY HATCH LTD. ("HATCH") FOR THE EXCLUSIVE USE OF BAFFINLAND IRON MINES LP ("CLIENT") AND ITS USE IS SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT BETWEEN HATCH AND THE THE CLIENT, INCLUDING ANY LIMITATIONS ON LIABILITY CONTAINED THEREIN. THIS DRAWING AND ITS CONTENTS REMAIN THE INTELLECTUAL PROPERTY OF HATCH SUBJECT TO CLIENT'S ROYALTY-FREE, IRREVOCABLE, PERPETUAL AND NON-EXCLUSIVE LICENSE TO USE AND REPRODUCE THE DRAWING FOR PURPOSES CONNECTED WITH THE PROJECT, INCLUDING THE CONSTRUCTION, COMPLETION, MAINTENANCE, EXTENSION, REINSTATEMENT AND REPAIR OF THE PROJECT. THIS DRAWING, AND THE INFORMATION CONTAINED HEREIN, SHALL BE TREATED AS CONFIDENTIAL FOR ALL OTHER PURPOSES AND SHALL NOT BE MODIFIED WITHOUT THE WRITTEN CONSENT OF HATCH.

No.	DESCRIPTION	BY	CHK'D	DATE
A	INTRERNAL / CLIENT REVIEW.	AJVN	GM	2017/02/03

REVISIONS

HATCH

ROLE	NAME	SIGNATURE	DATE
DRAFTSPERSON	A VAN NIEKERK	NR	2017/01/24
DESIGNER	A VAN NIEKERK	NR	2017/01/07
CHECKER	G JOHNSTONE	Digitally signed by Glen Johnstone Date: 2019.01.25 14:29:24 -05'00'	
DESIGN COORD.	G JOHNSTONE	Digitally signed by Glen Johnstone Date: 2019.01.25 14:29:53 -05'00'	
RESP. ENG.	R HALIM		
LEAD DISC. ENG.	F VAN BILJON	van Biljon, Fanus	
AREA LEAD	F VAN BILJON	van Biljon, Fanus	
ENG. MANAGER	D STANGER		
AREA MANAGER	F PITTMAN		

DRAWING APPROVAL STATUS: Internal / Client Review

Baffinland

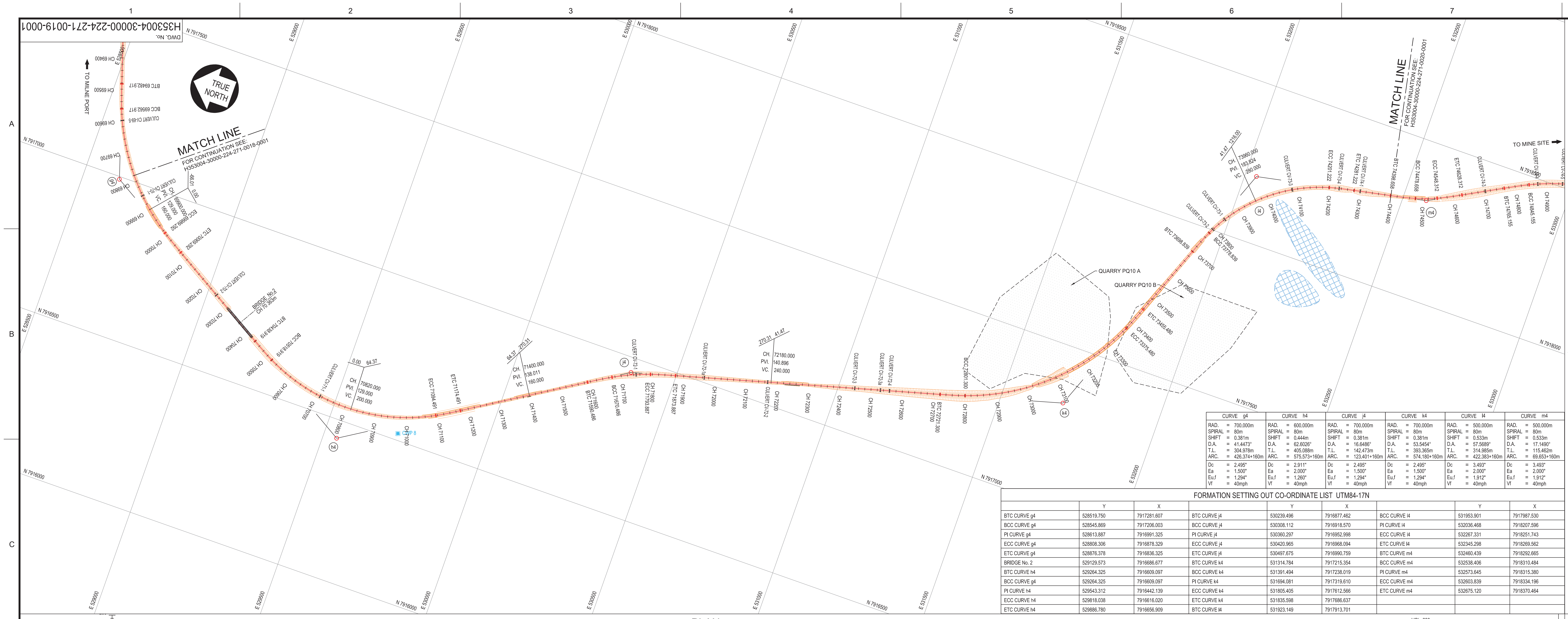
BAFFINLAND IRON MINES LP
MARY RIVER PROJECT

RAIL SITE
PLAN AND LONGITUDINAL SECTION
CH. 65+140 TO CH. 69+760

SCALE	DWG. No.	REV
1:5,000 OR AS NOTED	H353004-30000-224-271-0018-0001	A

SHEET SIZE: A0

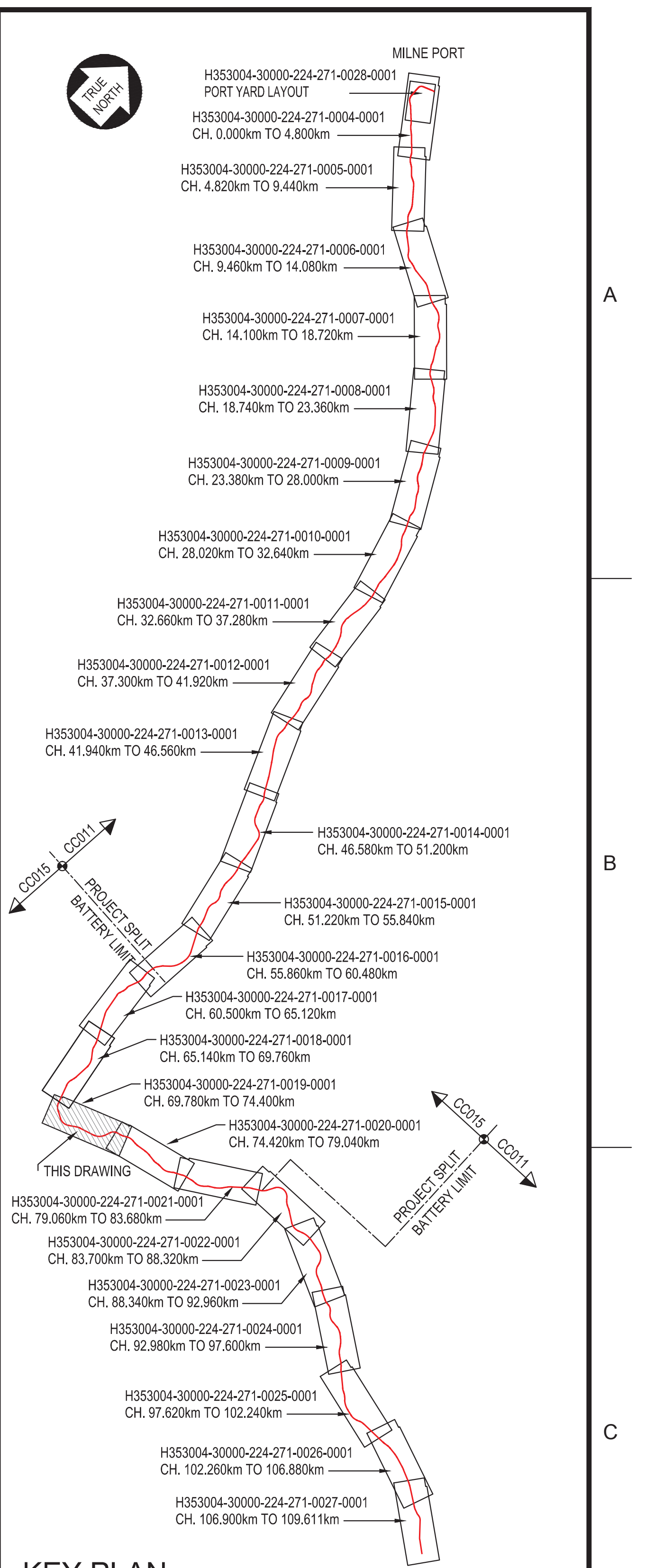
$USERNAME$ $DATE$ $FILE$ $TIME$


TRUE NORTH
TO MILNE PORT
MATCH LINE
FOR CONTINUATION SEE:
H353004-30000-224-271-0018-0001
MATCH LINE
FOR CONTINUATION SEE:
H353004-30000-224-271-0020-0001
TO MINE SITE
BRIDGE No.2
QUARRY PQ10 A
QUARRY PQ10 B
N 7917000
N 7916500
N 7916000
N 7917500
N 7918000
N 7918500
E 529000
E 529500
E 530000
E 530500
E 531000
E 531500
E 532000
E 532500
E 533000

CURVE g4	CURVE h4	CURVE j4	CURVE k4	CURVE l4	CURVE m4
RAD. = 700.000m SPIRAL = 80m SHIFT = 0.381m D.A. = 41.4473° T.L. = 304.978m ARC. = 426.374+160m	RAD. = 600.000m SPIRAL = 80m SHIFT = 0.444m D.A. = 62.6026° T.L. = 405.088m ARC. = 575.573+160m	RAD. = 700.000m SPIRAL = 80m SHIFT = 0.381m D.A. = 16.6486° T.L. = 142.473m ARC. = 123.401+160m	RAD. = 700.000m SPIRAL = 80m SHIFT = 0.381m D.A. = 53.5454° T.L. = 393.365m ARC. = 574.180+160m	RAD. = 500.000m SPIRAL = 80m SHIFT = 0.533m D.A. = 57.5689° T.L. = 314.985m ARC. = 422.383+160m	RAD. = 500.000m SPIRAL = 80m SHIFT = 0.533m D.A. = 17.1490° T.L. = 115.462m ARC. = 69.653+160m
Dc = 2.495" Ea = 1.500" Eu,f = 1.294" Vf = 40mph	Dc = 2.911" Ea = 2.000" Eu,f = 1.260" Vf = 40mph	Dc = 2.495" Ea = 1.500" Eu,f = 1.294" Vf = 40mph	Dc = 2.495" Ea = 1.500" Eu,f = 1.294" Vf = 40mph	Dc = 3.493" Ea = 2.000" Eu,f = 1.912" Vf = 40mph	Dc = 3.493" Ea = 2.000" Eu,f = 1.912" Vf = 40mph

FORMATION SETTING OUT CO-ORDINATE LIST UTM84-17N

	Y	X		Y	X		Y	X
BTC CURVE g4	528519.750	7917281.607	BTC CURVE j4	530239.496	7916877.462	BCC CURVE l4	531953.901	7917987.530
BCC CURVE g4	528545.869	7917206.003	BCC CURVE j4	530308.112	7916918.570	PI CURVE l4	532036.468	7918207.596
PI CURVE g4	528613.887	7916991.325	PI CURVE j4	530360.297	7916952.998	ECC CURVE l4	532267.331	7918251.743
ECC CURVE g4	528808.306	7916878.329	ECC CURVE j4	530420.965	7916968.094	ETC CURVE l4	532345.298	7918269.562
ETC CURVE g4	528876.378	7916836.325	ETC CURVE j4	530497.675	7916990.759	BTC CURVE m4	532460.439	7918292.665
BRIDGE No. 2	529129.573	7916686.677	BTC CURVE k4	531314.784	7917215.354	BCC CURVE m4	532538.406	7918310.484
BTC CURVE h4	529264.325	7916609.097	BCC CURVE k4	531391.494	7917238.019	PI CURVE m4	532573.645	7918315.380
BCC CURVE g4	529264.325	7916609.097	PI CURVE k4	531694.081	7917319.610	ECC CURVE m4	532603.839	7918334.196
PI CURVE h4	529543.312	7916442.139	ECC CURVE k4	531805.405	7917612.566	ETC CURVE m4	532675.120	7918370.464
ECC CURVE h4	529818.038	7916616.020	ETC CURVE k4	531835.598	7917686.637			
ETC CURVE h4	529886.780	7916656.909	BTC CURVE l4	531923.149	7917913.701			


MILNE PORT
H353004-30000-224-271-0028-0001
PORT YARD LAYOUT
H353004-30000-224-271-0004-0001
CH. 0.000km TO 4.800km
H353004-30000-224-271-0005-0001
CH. 4.820km TO 9.440km
H353004-30000-224-271-0006-0001
CH. 9.460km TO 14.080km
H353004-30000-224-271-0007-0001
CH. 14.100km TO 18.720km
H353004-30000-224-271-0008-0001
CH. 18.740km TO 23.360km
H353004-30000-224-271-0009-0001
CH. 23.380km TO 28.000km
H353004-30000-224-271-0010-0001
CH. 28.020km TO 32.640km
H353004-30000-224-271-0011-0001
CH. 32.660km TO 37.280km
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CH. 37.300km TO 41.920km
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CH. 46.580km TO 51.200km
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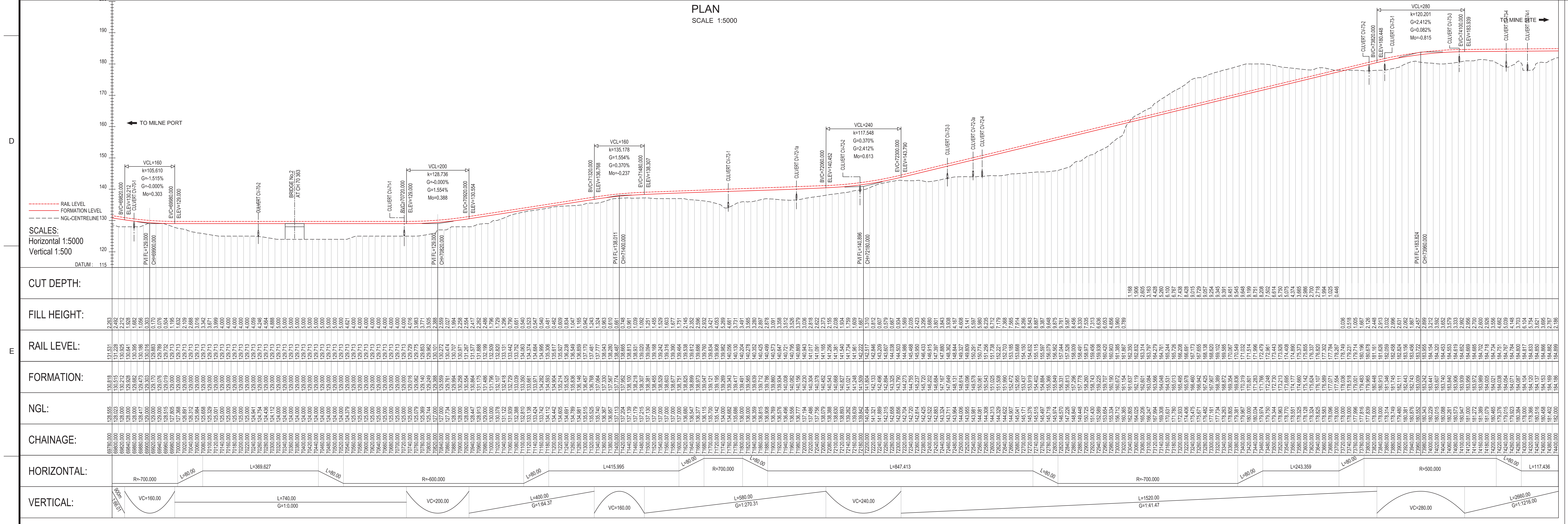
CH. 51.220km TO 55.840km
H353004-30000-224-271-0016-0001
CH. 55.860km TO 60.480km
H353004-30000-224-271-0017-0001
CH. 60.500km TO 65.120km
H353004-30000-224-271-0018-0001
CH. 65.140km TO 69.760km
H353004-30000-224-271-0019-0001
CH. 69.780km TO 74.400km
H353004-30000-224-271-0020-0001
CH. 74.420km TO 79.040km
THIS DRAWING
H353004-30000-224-271-0021-0001
CH. 79.060km TO 83.680km
H353004-30000-224-271-0022-0001
CH. 83.700km TO 88.320km
H353004-30000-224-271-0023-0001
CH. 88.340km TO 92.960km
H353004-30000-224-271-0024-0001
CH. 92.980km TO 97.600km
H353004-30000-224-271-0025-0001
CH. 97.620km TO 102.240km
H353004-30000-224-271-0026-0001
CH. 102.260km TO 106.880km
H353004-30000-224-271-0027-0001
CH. 106.900km TO 109.611km
PROJECT SPLIT BATTERY LIMIT
MINE SITE

KEY PLAN

NTS

PLAN

SCALE 1:5000


TO MILNE PORT
TO MINE SITE
RAIL LEVEL
FORMATION LEVEL
NGL-CENTRELINE
DATUM 115
CUT DEPTH:
FILL HEIGHT:
RAIL LEVEL:
FORMATION:
NGL:
CHAINAGE:
HORIZONTAL:
VERTICAL:
VCL=160
k=105.610
G=-1.515%
G=0.000%
Mo=0.303
VCL=200
k=128.736
G=0.000%
G=1.554%
Mo=0.388
VCL=160
k=135.178
G=1.554%
G=0.370%
Mo=-0.237
VCL=240
k=117.548
G=0.370%
G=2.412%
Mo=0.613
VCL=280
k=120.201
G=2.412%
G=0.082%
Mo=-0.815
R=-700.000
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R=-700.000
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L=369.627
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L=117.436
VC=160.00
L=740.00
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VC=160.00
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G=1:270.31
VC=240.00
L=1520.00
G=1:41.47
VC=280.00
L=2660.00
G=1:1216.00

SCALES:
Horizontal 1:5000
Vertical 1:500

LONGITUDINAL SECTION

LEGEND :

▣ = APPROVED WATER SOURCES

▨ = MASSIVE ICE FORMATION

NOTE :

1. EARTHWORKS FOOTPRINT DOES NOT INDICATE EXTENT OF FORMATION WIDENING AROUND CURVES WHERE APPLICABLE (REFER TO TYPICAL DRAWINGS) .

2. START / END DEVIATION REFER TO RAIL ALIGNMENT EXTENDING BEYOND EXISTING PERMITTING AREA BOUNDARIES.

3. CO-ORDINATE SYSTEM: WGS 1984 UTM, ZONE 17 NORTH, METER

4. ALL DIMENSIONS SHOWN ARE IN METERS, UNLESS OTHERWISE SPECIFIED.

5. THIS DRAWING WAS PREVIOUSLY ISSUED AS:
H353004-00000-224-272-0019 -0001

6. FORMATION = TOP OF SUBGRADE.

7. CURVE DATA BELOW THE LINE IS IN IMPERIAL UNITS (IU).

PERMIT TO PRACTICE
HATCH LTD.
Signature
Date
PERMIT NUMBER: P 512
The Association of Professional Engineers, Geologists and Geophysicists of NWT/NU

DRAWING No.	DRAWING TITLE
H353004-30000-224-271-0020-0001	LINE PLAN AND LONGITUDINAL SECTION CH. 74+420 TO CH. 79+040
H353004-30000-224-271-0018-0001	LINE PLAN AND LONGITUDINAL SECTION CH. 65+140 TO CH. 69+760

REFERENCE DRAWINGS

REG. PROFESSIONAL

NOT FOR CONSTRUCTION

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No.	DESCRIPTION	BY	CHK'D	DATE
A	INTERNAL / CLIENT REVIEW.	AJVN		2019/01/08

REVISIONS

HATCH

ROLE	NAME	SIGNATURE	DATE
DRAFTSPERSON	A VAN NIEKERK	NR	2017/01/24
DESIGNER	A VAN NIEKERK	NR	2017/01/07
CHECKER	G JOHNSTONE	Digitally signed by Glen johnstone Date: 2019.01.25 14:30:40 -05'00'	
DESIGN COORD.	G JOHNSTONE	Digitally signed by Glen johnstone Date: 2019.01.25 14:31:16 -05'00'	
RESP. ENG.	R HALIM		
LEAD DISC. ENG.	F VAN BILJON	van Biljon, Fanus	
AREA LEAD	F VAN BILJON	van Biljon, Fanus	
ENG. MANAGER	D STANGER		
AREA MANAGER	F PITTMAN		

DRAWING APPROVAL STATUS: Internal / Client Review

Baffinland

BAFFINLAND IRON MINES LP
MARY RIVER PROJECT

RAIL SITE
PLAN AND LONGITUDINAL SECTION
CH. 69+780 TO CH. 74+400

SCALE 1:5,000 OR AS NOTED

DWG. No. H353004-30000-224-271-0019-0001

REV A

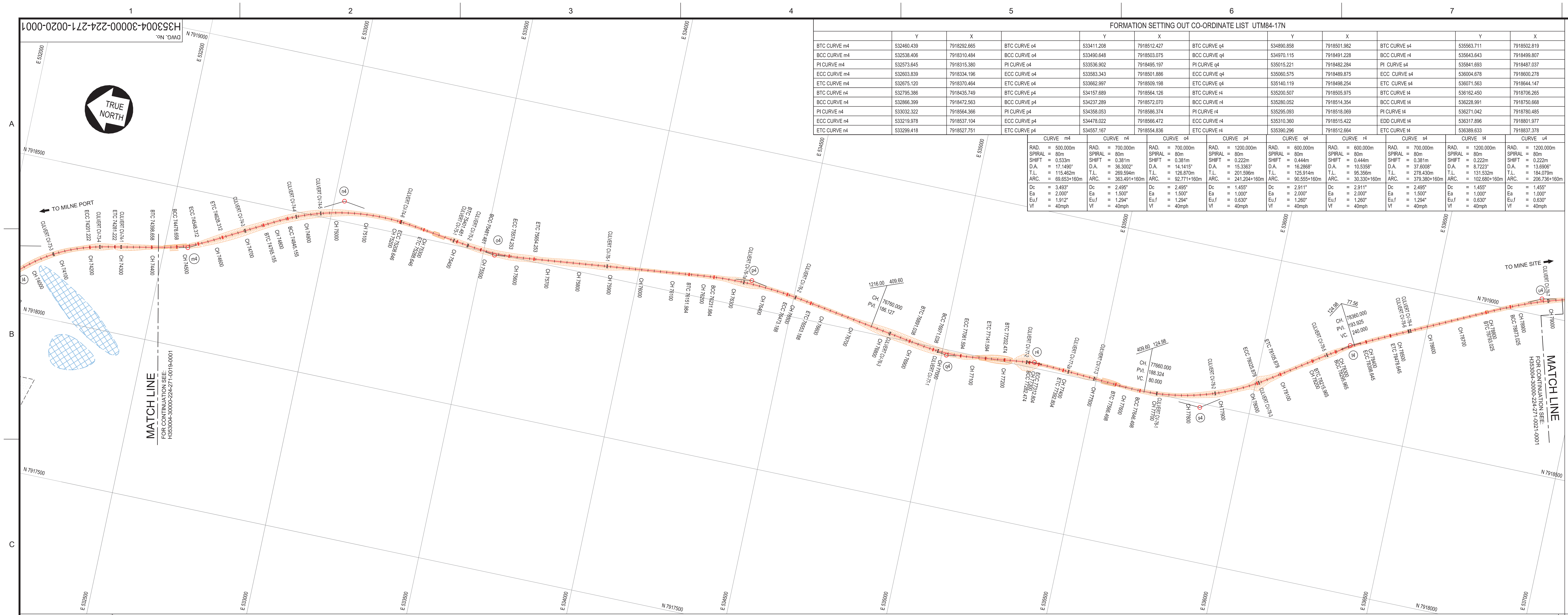
SHEET SIZE: A0

$TIME$
$USERNAME$
$DATE$
$FILE$

FORMATION SETTING OUT CO-ORDINATE LIST UTM84-17N

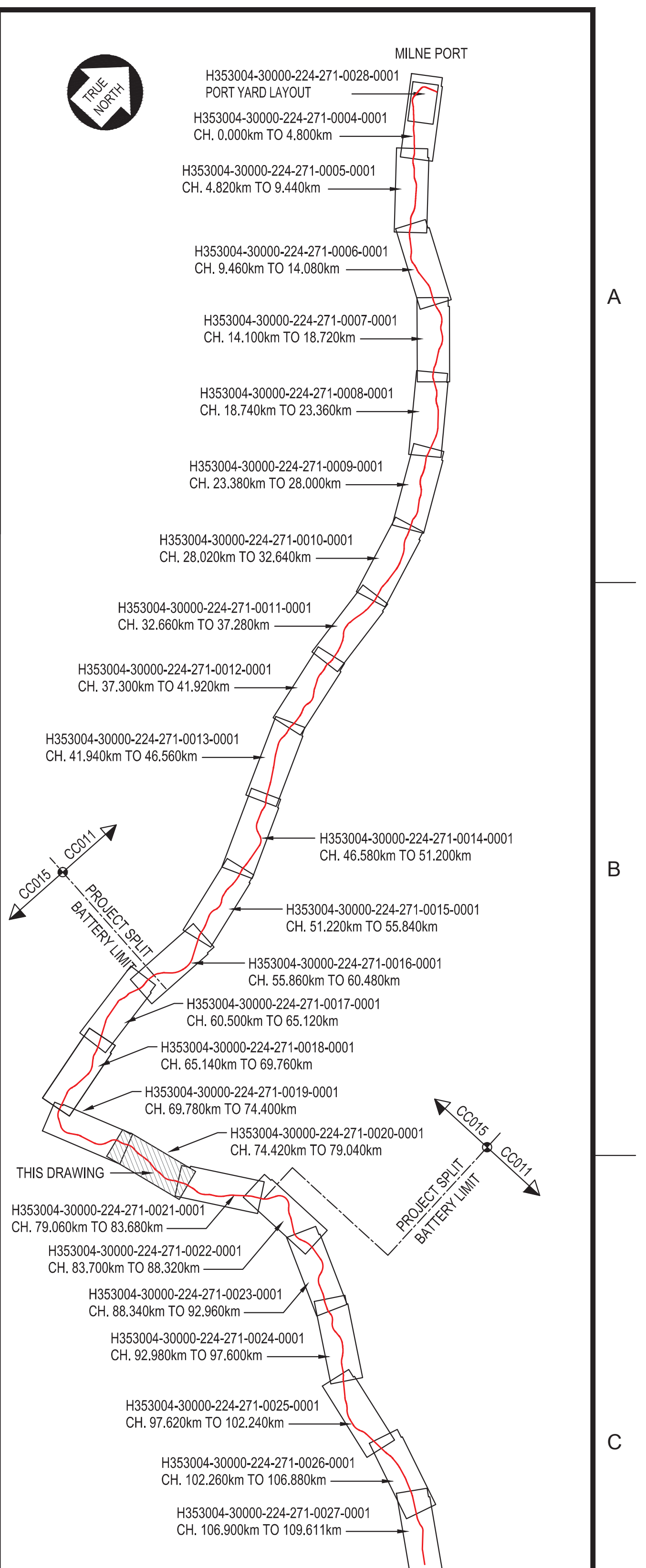
	Y	X		Y	X		Y	X		Y	X
BTC CURVE m4	532460.439	7918292.665	BTC CURVE o4	533411.208	7918512.427	BTC CURVE q4	534890.858	7918501.982	BTC CURVE s4	535563.711	7918502.819
BCC CURVE m4	532538.406	7918310.484	BCC CURVE o4	533490.648	7918503.075	BCC CURVE q4	534970.115	7918491.228	BCC CURVE r4	535643.643	7918499.807
PI CURVE m4	532573.645	7918315.380	PI CURVE o4	533536.902	7918495.197	PI CURVE q4	535015.221	7918482.284	PI CURVE s4	535841.693	7918487.037
ECC CURVE m4	532603.839	7918334.196	ECC CURVE o4	533583.343	7918501.886	ECC CURVE q4	535060.575	7918489.875	ECC CURVE s4	536004.678	7918600.278
ETC CURVE m4	532675.120	7918370.464	ETC CURVE o4	533662.997	7918509.198	ETC CURVE q4	535140.119	7918498.254	ETC CURVE s4	536071.563	7918644.147
BTC CURVE n4	532795.386	7918435.749	BTC CURVE p4	534157.689	7918564.126	BTC CURVE r4	535200.507	7918505.975	BTC CURVE t4	536162.450	7918706.265
BCC CURVE n4	532866.399	7918472.563	BCC CURVE p4	534237.289	7918572.070	BCC CURVE r4	535280.052	7918514.354	BCC CURVE t4	536228.991	7918750.668
PI CURVE n4	533032.322	7918564.366	PI CURVE p4	534358.053	7918586.374	PI CURVE r4	535295.093	7918518.069	PI CURVE t4	536271.042	7918780.485
ECC CURVE n4	533219.978	7918537.104	ECC CURVE p4	534478.022	7918566.472	ECC CURVE r4	535310.360	7918515.422	EDD CURVE t4	536317.896	7918801.977
ETC CURVE n4	533299.418	7918527.751	ETC CURVE p4	534557.167	7918554.836	ETC CURVE r4	535390.296	7918512.664	ETC CURVE t4	536389.633	7918837.378

	CURVE m4	CURVE n4	CURVE o4	CURVE p4	CURVE q4	CURVE r4	CURVE s4	CURVE t4	CURVE u4
RAD.	500.000m	700.000m	700.000m	1200.000m	600.000m	600.000m	700.000m	1200.000m	1200.000m
SPIRAL	80m	80m	80m	80m	80m	80m	80m	80m	80m
SHIFT	0.533m	0.381m	0.381m	0.222m	0.444m	0.444m	0.381m	0.222m	0.222m
D.A.	17.1490°	36.3002°	14.1415°	15.3363°	16.2868°	10.5358°	37.6008°	8.7223°	13.6906°
T.L.	115.462m	269.594m	126.870m	201.596m	125.914m	95.356m	278.430m	131.532m	184.079m
ARC.	69.653+160m	363.491+160m	92.771+160m	241.204+160m	90.555+160m	30.330+160m	379.380+160m	102.680+160m	206.736+160m
Dc	3.493"	2.495"	2.495"	1.455"	2.911"	2.911"	2.495"	1.455"	1.455"
Ea	2.000"	1.500"	1.500"	1.000"	2.000"	2.000"	1.500"	1.000"	1.000"
Eu,f	1.912"	1.294"	1.294"	0.630"	1.260"	1.260"	1.294"	0.630"	0.630"
Vf	40mph	40mph	40mph	40mph	40mph	40mph	40mph	40mph	40mph


H353004-30000-224-271-0020-0001
DWG. No.
TRUE NORTH
TO MILNE PORT
TO MINE SITE
MATCH LINE
FOR CONTINUATION SEE:
H353004-30000-224-271-0019-0001
MATCH LINE
FOR CONTINUATION SEE:
H353004-30000-224-271-0021-0001
N 7919000
N 7918500
N 7918000
N 7917500
E 532000
E 532500
E 533000
E 533500
E 534000
E 534500
E 535000
E 535500
E 536000
E 536500
E 537000
CULVERT CV-74-3
CULVERT CV-74-4
CULVERT CV-74-5
CULVERT CV-78-7
CH 74500
CH 75000
CH 76000
CH 77000
CH 78000
CH 79000
CH. 76760.000 PVI. 186.127
CH. 77660.000 PVI. 188.324 VC. 80.000
CH. 78360.000 PVI. 193.925 VC. 240.000

PLAN

SCALE 1:5000


MILNE PORT
H353004-30000-224-271-0028-0001
PORT YARD LAYOUT
H353004-30000-224-271-0004-0001
CH. 0.000km TO 4.800km
H353004-30000-224-271-0005-0001
CH. 4.820km TO 9.440km
H353004-30000-224-271-0006-0001
CH. 9.460km TO 14.080km
H353004-30000-224-271-0007-0001
CH. 14.100km TO 18.720km
H353004-30000-224-271-0008-0001
CH. 18.740km TO 23.360km
H353004-30000-224-271-0009-0001
CH. 23.380km TO 28.000km
H353004-30000-224-271-0010-0001
CH. 28.020km TO 32.640km
H353004-30000-224-271-0011-0001
CH. 32.660km TO 37.280km
H353004-30000-224-271-0012-0001
CH. 37.300km TO 41.920km
H353004-30000-224-271-0013-0001
CH. 41.940km TO 46.560km
H353004-30000-224-271-0014-0001
CH. 46.580km TO 51.200km
H353004-30000-224-271-0015-0001
CH. 51.220km TO 55.840km
H353004-30000-224-271-0016-0001
CH. 55.860km TO 60.480km
H353004-30000-224-271-0017-0001
CH. 60.500km TO 65.120km
H353004-30000-224-271-0018-0001
CH. 65.140km TO 69.760km
H353004-30000-224-271-0019-0001
CH. 69.780km TO 74.400km
H353004-30000-224-271-0020-0001
CH. 74.420km TO 79.040km
THIS DRAWING
H353004-30000-224-271-0021-0001
CH. 79.060km TO 83.680km
H353004-30000-224-271-0022-0001
CH. 83.700km TO 88.320km
H353004-30000-224-271-0023-0001
CH. 88.340km TO 92.960km
H353004-30000-224-271-0024-0001
CH. 92.980km TO 97.600km
H353004-30000-224-271-0025-0001
CH. 97.620km TO 102.240km
H353004-30000-224-271-0026-0001
CH. 102.260km TO 106.880km
H353004-30000-224-271-0027-0001
CH. 106.900km TO 109.611km
CC015
CC011
PROJECT SPLIT
BATTERY LIMIT
MINE SITE
TRUE NORTH

KEY PLAN

NTS

LEGEND :

▣ = APPROVED WATER SOURCES

▨ = MASSIVE ICE FORMATION

NOTE :

1. EARTHWORKS FOOTPRINT DOES NOT INDICATE EXTENT OF FORMATION WIDENING AROUND CURVES WHERE APPLICABLE (REFER TO TYPICAL DRAWINGS) .

2. START / END DEVIATION REFER TO RAIL ALIGNMENT EXTENDING BEYOND EXISTING PERMITTING AREA BOUNDARIES.

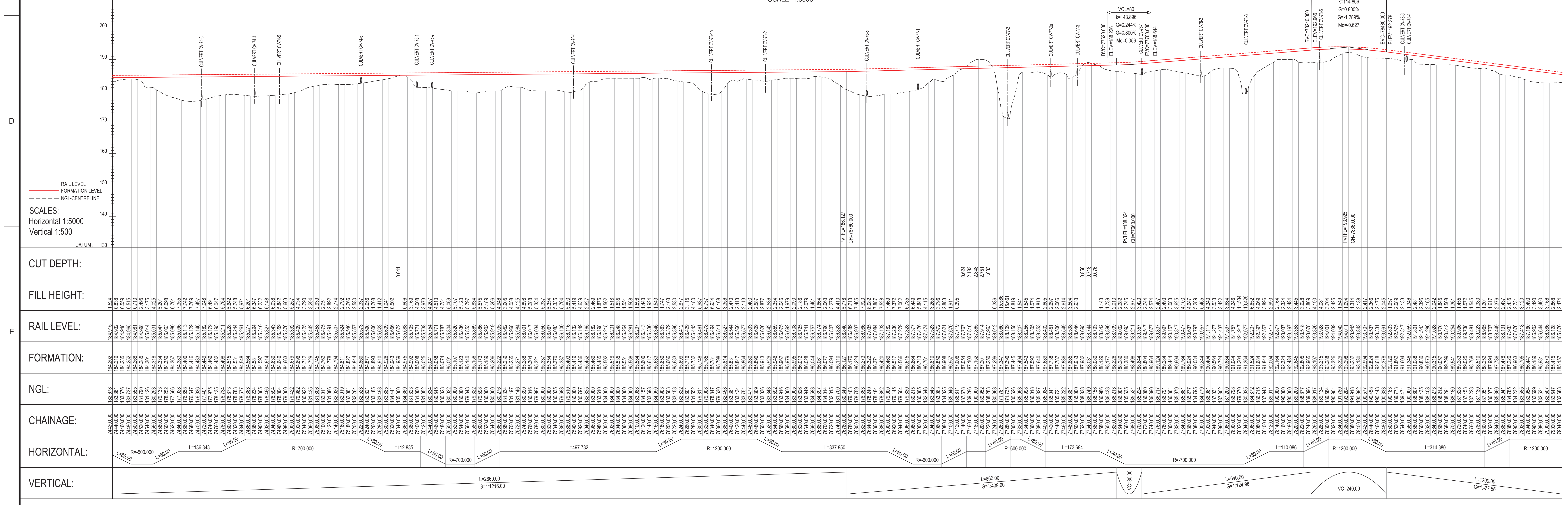
3. CO-ORDINATE SYSTEM: WGS 1984 UTM, ZONE 17 NORTH, METER

4. ALL DIMENSIONS SHOWN ARE IN METERS, UNLESS OTHERWISE SPECIFIED.

5. THIS DRAWING WAS PREVIOUSLY ISSUED AS:
H353004-00000-224-272-0020 -0001

6. FORMATION = TOP OF SUBGRADE.

7. CURVE DATA BELOW THE LINE IS IN IMPERIAL UNITS (IU).


TO MILNE PORT
TO MINE SITE
RAIL LEVEL
FORMATION LEVEL
NGL-CENTRELINE
SCALES:
Horizontal 1:5000
Vertical 1:500
DATUM
VCL=80
k=143.896
G=0.244%
G=0.800%
Mo=0.056
VCL=240
k=114.866
G=0.800%
G=-1.289%
Mo=-0.627
PVI FL=186.127 CH=76760.000
PVI FL=188.324 CH=77660.000
PVI FL=193.925 CH=78360.000
CUT DEPTH:
FILL HEIGHT:
RAIL LEVEL:
FORMATION:
NGL:
CHAINAGE:
HORIZONTAL:
VERTICAL:
R=-500.000
L=136.843
R=700.000
L=112.835
R=-700.000
L=497.732
R=1200.000
L=337.850
R=-600.000
R=600.000
L=173.694
R=-700.000
L=110.086
R=1200.000
L=314.380
R=1200.000
L=80.00
L=2660.00
G=1:1216.00
L=860.00
G=1:409.60
VC=80.00
L=540.00
G=1:124.98
VC=240.00
L=1200.00
G=1:-77.56

LONGITUDINAL SECTION

PERMIT TO PRACTICE
HATCH LTD.
Signature
Date
PERMIT NUMBER: P 512
The Association of Professional Engineers, Geologists and Geophysicists of NWT/NU

DRAWING No.	DRAWING TITLE
H353004-30000-224-271-0021-0001	LINE PLAN AND LONGITUDINAL SECTION CH. 79+060 TO CH. 83+680
H353004-30000-224-271-0019-0001	LINE PLAN AND LONGITUDINAL SECTION CH. 69+780 TO CH. 74+400

REFERENCE DRAWINGS

REG. PROFESSIONAL

NOT FOR CONSTRUCTION

THIS DRAWING WAS PREPARED BY HATCH LTD. ("HATCH") FOR THE EXCLUSIVE USE OF BAFFINLAND IRON MINES LP ("CLIENT") AND ITS USE IS SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT BETWEEN HATCH AND THE THE CLIENT, INCLUDING ANY LIMITATIONS ON LIABILITY CONTAINED THEREIN. THIS DRAWING AND ITS CONTENTS REMAIN THE INTELLECTUAL PROPERTY OF HATCH SUBJECT TO CLIENT'S ROYALTY-FREE, IRREVOCABLE, PERPETUAL AND NON-EXCLUSIVE LICENSE TO USE AND REPRODUCE THE DRAWING FOR PURPOSES CONNECTED WITH THE PROJECT, INCLUDING THE CONSTRUCTION, COMPLETION, MAINTENANCE, EXTENSION, REINSTATEMENT AND REPAIR OF THE PROJECT. THIS DRAWING, AND THE INFORMATION CONTAINED HEREIN, SHALL BE TREATED AS CONFIDENTIAL FOR ALL OTHER PURPOSES AND SHALL NOT BE MODIFIED WITHOUT THE WRITTEN CONSENT OF HATCH.

No.	DESCRIPTION	BY	CHK'D	DATE
A	INTERNAL / CLIENT REVIEW.	AJVN		2019/01/08

REVISIONS

HATCH

ROLE	NAME	SIGNATURE	DATE
DRAFTSPERSON	A VAN NIEKERK	NR	2017/01/24
DESIGNER	A VAN NIEKERK	NR	2017/01/07
CHECKER	G JOHNSTONE	Digitally signed by Glen johnstone Date: 2019.01.25 14:32:13 -05'00'	
DESIGN COORD.	G JOHNSTONE	Digitally signed by Glen johnstone Date: 2019.01.25 14:32:38 -05'00'	
RESP. ENG.	R HALIM		
LEAD DISC. ENG.	F VAN BILJON	van Biljon, Fanus	
AREA LEAD	F VAN BILJON	van Biljon, Fanus	
ENG. MANAGER	D STANGER		
AREA MANAGER	F PITTMAN		

DRAWING APPROVAL STATUS: Internal / Client Review

Baffinland

BAFFINLAND IRON MINES LP
MARY RIVER PROJECT

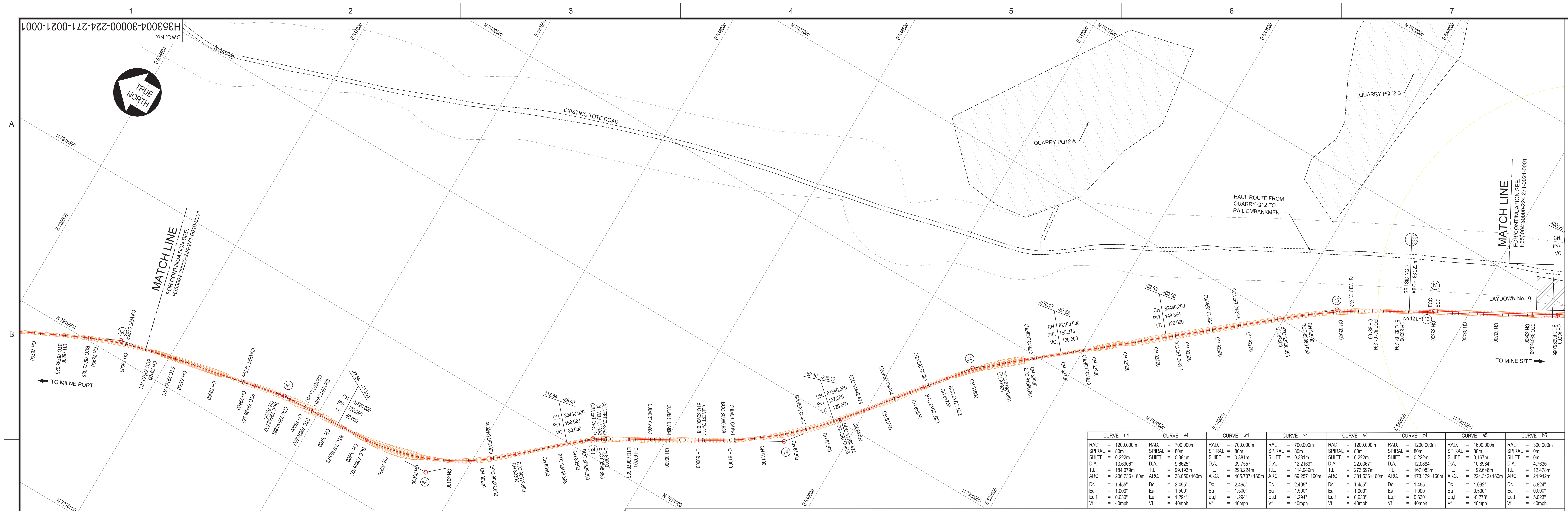
RAIL SITE
PLAN AND LONGITUDINAL SECTION
CH. 74+420 TO CH. 79+040

SCALE	DWG. No.	REV
1:5,000 OR AS NOTED	H353004-30000-224-271-0020-0001	A

SHEET SIZE: A0

$USERNAME$
$DATE$
$FILE$
$TIME$

DWG. No. H353004-30000-224-271-0021-0001


TRUE NORTH
EXISTING TOTE ROAD
QUARRY PQ12 A
QUARRY PQ12 B
HAUL ROUTE FROM QUARRY Q12 TO RAIL EMBANKMENT
MATCH LINE
FOR CONTINUATION SEE: H353004-30000-224-271-0019-0001
MATCH LINE
FOR CONTINUATION SEE: H353004-30000-224-271-0021-0001
TO MILNE PORT
TO MINE SITE
LAYDOWN No.10
SRJ SIDING 3 AT CH. 83 222m
No.12 LH
CULVERT CV-78-7
CULVERT CV-79-0
CULVERT CV-79-1
CULVERT CV-80-1
CULVERT CV-83-1
CULVERT CV-83-1a
CULVERT CV-83-2
CH. 79720.000
PVI. 176.390
VC. 80.000
-77.56
-113.54
E 536500
N 7919000
N 7919500
N 7920000
N 7920500
N 7921000
E 539000
E 539500
E 540000
E 540500

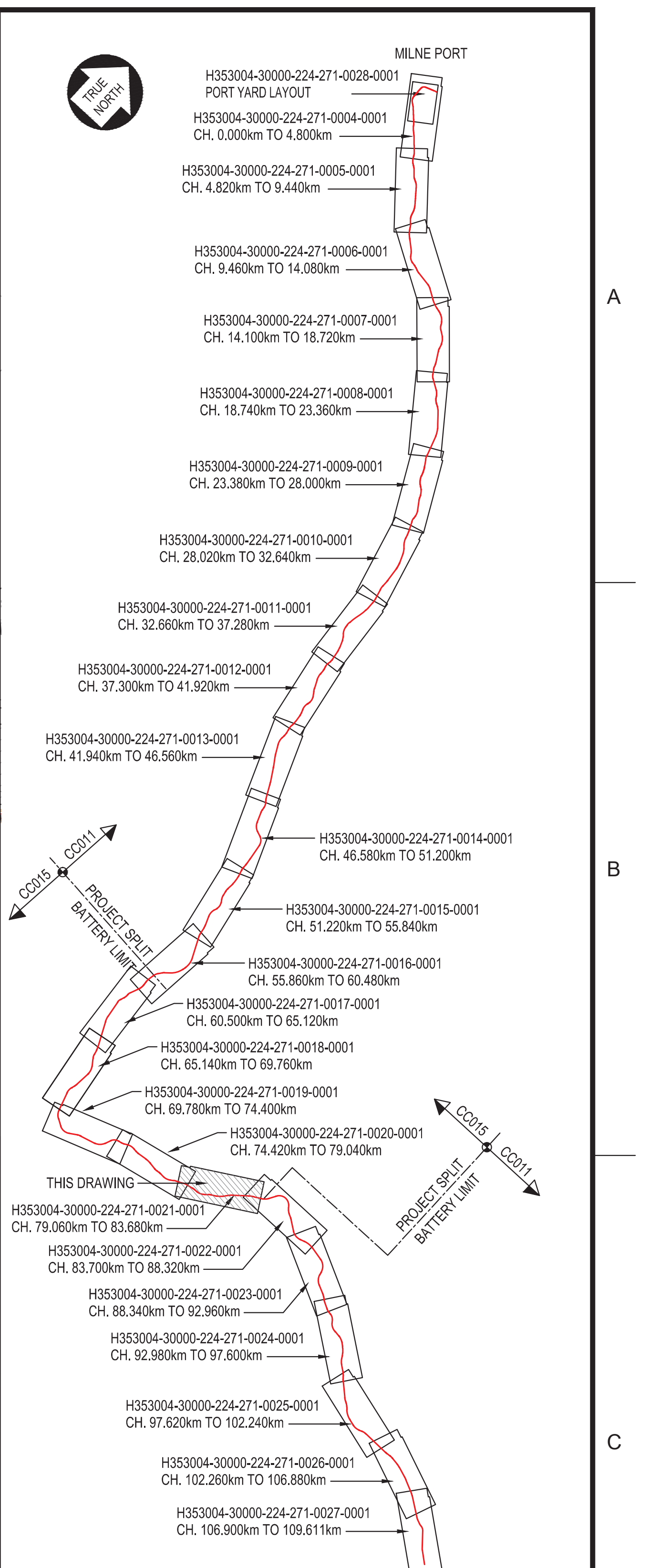
CURVE u4	CURVE v4	CURVE w4	CURVE x4	CURVE y4	CURVE z4	CURVE a5	CURVE b5
RAD. = 1200.000m	RAD. = 700.000m	RAD. = 700.000m	RAD. = 700.000m	RAD. = 1200.000m	RAD. = 1200.000m	RAD. = 1600.000m	RAD. = 300.000m
SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 0m
SHIFT = 0.222m	SHIFT = 0.381m	SHIFT = 0.381m	SHIFT = 0.381m	SHIFT = 0.222m	SHIFT = 0.222m	SHIFT = 0.167m	SHIFT = 0m
D.A. = 13.6906°	D.A. = 9.6625°	D.A. = 39.7557°	D.A. = 12.2169°	D.A. = 22.0367°	D.A. = 12.0884°	D.A. = 10.8984°	D.A. = 4.7636°
T.L. = 184.079m	T.L. = 99.193m	T.L. = 293.224m	T.L. = 114.949m	T.L. = 273.697m	T.L. = 167.083m	T.L. = 192.646m	T.L. = 12.478m
ARC. = 206.736+160m	ARC. = 38.050+160m	ARC. = 405.707+160m	ARC. = 69.257+160m	ARC. = 381.536+160m	ARC. = 173.179+160m	ARC. = 224.342+160m	ARC. = 24.942m
Dc = 1.455"	Dc = 2.495"	Dc = 2.495"	Dc = 2.495"	Dc = 1.455"	Dc = 1.455"	Dc = 1.092"	Dc = 5.824"
Ea = 1.000"	Ea = 1.500"	Ea = 1.500"	Ea = 1.500"	Ea = 1.000"	Ea = 1.000"	Ea = 0.500"	Ea = 0.000"
Eu,f = 0.630"	Eu,f = 1.294"	Eu,f = 1.294"	Eu,f = 1.294"	Eu,f = 0.630"	Eu,f = 0.630"	Eu,f = -0.278"	Eu,f = 5.023"
Vf = 40mph	Vf = 40mph	Vf = 40mph	Vf = 40mph	Vf = 40mph	Vf = 40mph	Vf = 40mph	Vf = 40mph

FORMATION SETTING OUT CO-ORDINATE LIST UTM84-17N

				Y	X		Y	X		Y	X		Y	X
BTC CURVE u4	536673.082	7918973.361	ETC CURVE v4	537478.561	7919171.182	ECC CURVE x4	538327.384	7919568.490	PI CURVE z4	539225.336	7920364.142	PI No.12 LH 12	540344.584	7921235.630
BCC CURVE u4	536745.587	7919007.160	BTC CURVE w4	537598.557	7919175.951	ETC CURVE x4	538396.015	7919609.575	ECC CURVE z4	539292.852	7920419.164	ES No.12 LH 12	540363.093	7921245.834
PI CURVE u4	536839.050	7919052.984	BCC CURVE w4	537678.408	7919180.649	BTC CURVE y4	538588.875	7919720.094	ETC CURVE z4	539353.772	7920471.011	ETO No.12 LH 12	540362.242	7921247.378
BCC CURVE u4	536941.070	7919073.646	PI CURVE w4	537891.550	7919187.596	BCC CURVE y4	538657.837	7919760.636	BTC CURVE a5	539983.527	7920995.017	BCC CURVE b5	540389.320	7921265.388
ETC CURVE u4	537019.147	7919091.063	ECC CURVE w4	538048.926	7919331.507	PI CURVE y4	538826.345	7919856.175	BCC CURVE a5	540045.445	7921045.670	PI CURVE b5	540399.710	7921272.299
BTC CURVE v4	537282.399	7919146.723	ETC CURVE w4	538109.349	7919383.921	ECC CURVE y4	538945.299	7920009.057	PI CURVE a5	540131.613	7921118.236	ECC CURVE b5	540410.638	7921278.323
BCC CURVE v4	537360.958	7919161.776	BTC CURVE x4	538210.900	7919475.459	ETC CURVE y4	538995.408	7920071.414	ECC CURVE a5	540230.591	7921172.034	BTC CURVE c5	540677.509	7921419.149
PI CURVE v4	537379.446	7919167.243	BCC CURVE x4	538271.322	7919527.874	BTC CURVE z4	539122.128	7920232.745	ETC CURVE a5	540300.326	7921211.235	BTC CURVE d5	540674.854	7921423.965
ECC CURVE v4	537398.711	7919166.484	PI CURVE x4	538296.281	7919552.423	BCC CURVE z4	539172.238	7920295.102	SRJ No.12 LH 12	540333.605	7921229.579			

PLAN

SCALE 1:5000


TRUE NORTH
MILNE PORT
H353004-30000-224-271-0028-0001
PORT YARD LAYOUT
H353004-30000-224-271-0004-0001
CH. 0.000km TO 4.800km
H353004-30000-224-271-0005-0001
CH. 4.820km TO 9.440km
H353004-30000-224-271-0006-0001
CH. 9.460km TO 14.080km
H353004-30000-224-271-0007-0001
CH. 14.100km TO 18.720km
H353004-30000-224-271-0008-0001
CH. 18.740km TO 23.360km
H353004-30000-224-271-0009-0001
CH. 23.380km TO 28.000km
H353004-30000-224-271-0010-0001
CH. 28.020km TO 32.640km
H353004-30000-224-271-0011-0001
CH. 32.660km TO 37.280km
H353004-30000-224-271-0012-0001
CH. 37.300km TO 41.920km
H353004-30000-224-271-0013-0001
CH. 41.940km TO 46.560km
H353004-30000-224-271-0014-0001
CH. 46.580km TO 51.200km
H353004-30000-224-271-0015-0001
CH. 51.220km TO 55.840km
H353004-30000-224-271-0016-0001
CH. 55.860km TO 60.480km
H353004-30000-224-271-0017-0001
CH. 60.500km TO 65.120km
H353004-30000-224-271-0018-0001
CH. 65.140km TO 69.760km
H353004-30000-224-271-0019-0001
CH. 69.780km TO 74.400km
H353004-30000-224-271-0020-0001
CH. 74.420km TO 79.040km
THIS DRAWING
H353004-30000-224-271-0021-0001
CH. 79.060km TO 83.680km
H353004-30000-224-271-0022-0001
CH. 83.700km TO 88.320km
H353004-30000-224-271-0023-0001
CH. 88.340km TO 92.960km
H353004-30000-224-271-0024-0001
CH. 92.980km TO 97.600km
H353004-30000-224-271-0025-0001
CH. 97.620km TO 102.240km
H353004-30000-224-271-0026-0001
CH. 102.260km TO 106.880km
H353004-30000-224-271-0027-0001
CH. 106.900km TO 109.611km
CC015
CC011
PROJECT SPLIT
BATTERY LIMIT
MINE SITE

KEY PLAN

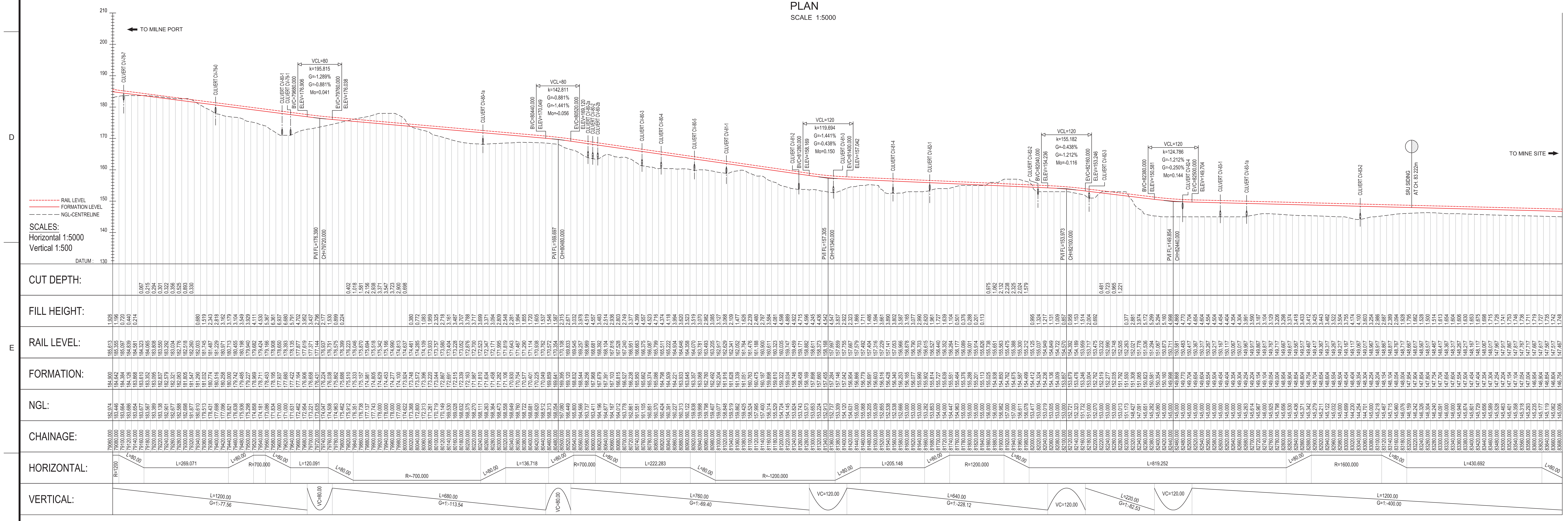
NTS

LEGEND :

- ▣ = APPROVED WATER SOURCES
- ▨ = MASSIVE ICE FORMATION

NOTE :

1. EARTHWORKS FOOTPRINT DOES NOT INDICATE EXTENT OF FORMATION WIDENING AROUND CURVES WHERE APPLICABLE (REFER TO TYPICAL DRAWINGS) .
2. START / END DEVIATION REFER TO RAIL ALIGNMENT EXTENDING BEYOND EXISTING PERMITTING AREA BOUNDARIES.
3. CO-ORDINATE SYSTEM: WGS 1984 UTM, ZONE 17 NORTH, METER
4. ALL DIMENSIONS SHOWN ARE IN METERS, UNLESS OTHERWISE SPECIFIED.
5. THIS DRAWING WAS PREVIOUSLY ISSUED AS: H353004-00000-224-272-0021 -0001
6. FORMATION = TOP OF SUBGRADE.
7. CURVE DATA BELOW THE LINE IS IN IMPERIAL UNITS (IU).



LONGITUDINAL SECTION

DRAWING No.	DRAWING TITLE
H353004-30000-224-271-0022-0001	LINE PLAN AND LONGITUDINAL SECTION CH. 83+700 TO CH. 88+320
H353004-30000-224-271-0020-0001	LINE PLAN AND LONGITUDINAL SECTION CH. 74+420 TO CH. 79+040

REFERENCE DRAWINGS

REG. PROFESSIONAL

NOT FOR CONSTRUCTION

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No.	DESCRIPTION	BY	CHK'D	DATE
A	INTERNAL / CLIENT REVIEW.	AJVN		2019/01/09

REVISIONS

HATCH

ROLE	NAME	SIGNATURE	DATE
DRAFTSPERSON	A VAN NIEKERK	NR	2017/01/24
DESIGNER	A VAN NIEKERK	NR	2017/01/07
CHECKER	G JOHNSTONE	Digitally signed by Johnstone, Glen Date: 2019.01.25 14:33:31 -05'00'	
DESIGN COORD.	G JOHNSTONE	Digitally signed by Glen johnstone Date: 2019.01.25 14:34:29 -05'00'	
RESP. ENG.	R HALIM		
LEAD DISC. ENG.	F VAN BILJON	van Biljon, Fanus	
AREA LEAD	F VAN BILJON	van Biljon, Fanus	
ENG. MANAGER	D STANGER		
AREA MANAGER	F PITTMAN		

DRAWING APPROVAL STATUS: Internal / Client Review

PERMIT TO PRACTICE
HATCH LTD.
Signature
Date
PERMIT NUMBER: P 512
The Association of Professional Engineers, Geologists and Geophysicists of NWT/NU

Baffinland

BAFFINLAND IRON MINES LP
MARY RIVER PROJECT

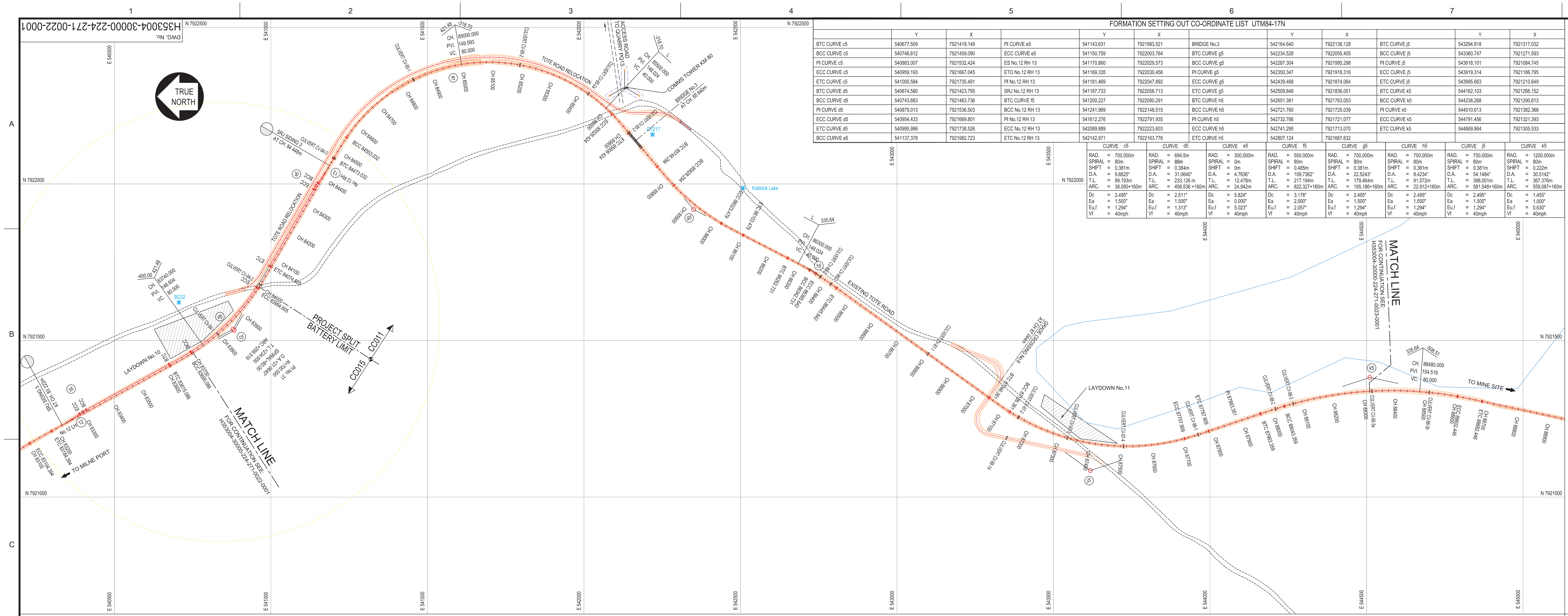
RAIL SITE
PLAN AND LONGITUDINAL SECTION
CH. 79+060 TO CH. 83+680

SCALE 1:5,000 OR AS NOTED
DWG. No. H353004-30000-224-271-0021-0001
REV A

SHEET SIZE: A0

$USERNAMES $DATES $FILES $TIMES

DWG. No.
H353004-30000-224-271-0022-0001


TRUE NORTH
TOTE ROAD RELOCATION
EXISTING TOTE ROAD
ACCESS ROAD TO QUARRY PQ-13
COMMS TOWER KM 80
BRIDGE No.3 AT CH. 85 640m
SRJ SIDING AT CH. 84 448m
LAYDOWN No.10
LAYDOWN No.11
Katiktok Lake
PROJECT SPLIT BATTERY LIMIT
CC015
CC011
TO MILNE PORT
TO MINE SITE
MATCH LINE FOR CONTINUATION SEE: H353004-30000-224-271-0021-0001
MATCH LINE FOR CONTINUATION SEE: H353004-30000-224-271-0023-0001
N 7922500
N 7922000
N 7921500
N 7921000
E 540500
E 541000
E 541500
E 542000
E 542500
E 543000
E 543500
E 544000
E 544500
E 545000

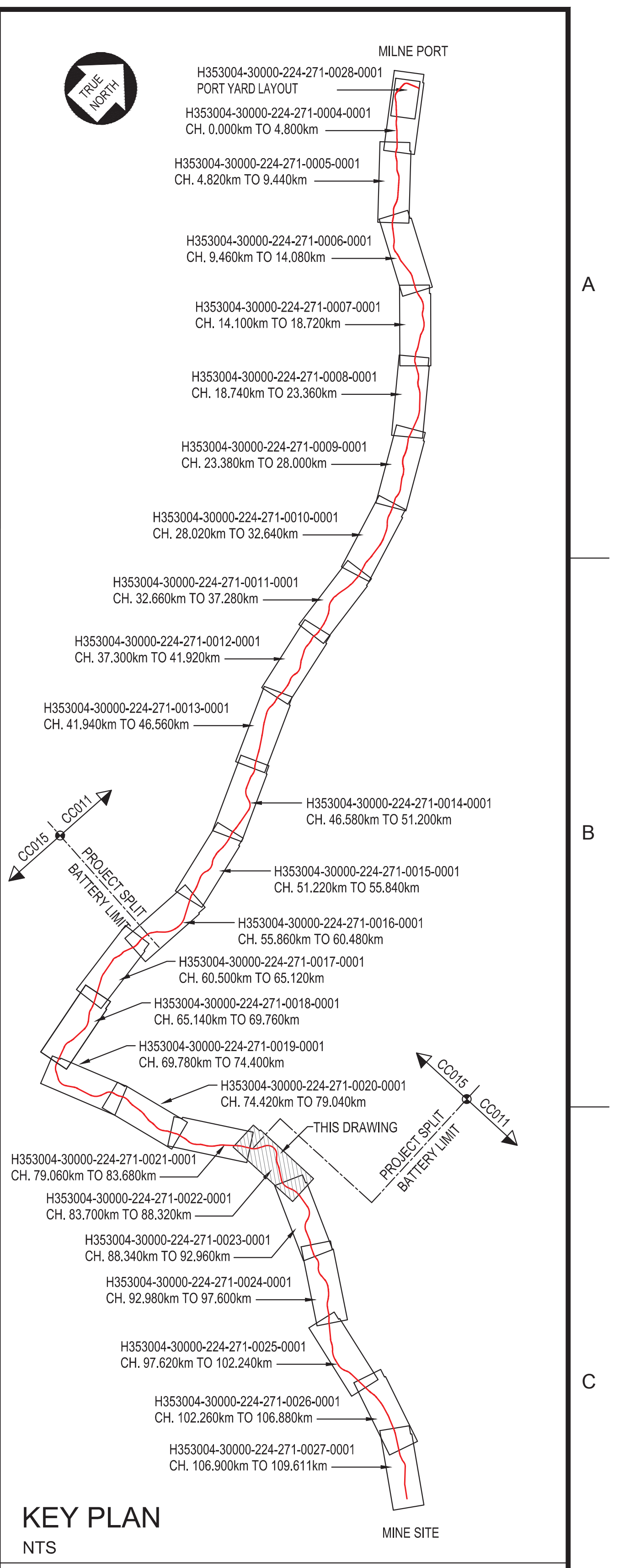
PLAN

SCALE 1:5000

FORMATION SETTING OUT CO-ORDINATE LIST UTM84-17N

	Y	X		Y	X		Y	X		Y	X
BTC CURVE c5	540677.509	7921419.149	PI CURVE e5	541143.631	7921993.521	BRIDGE No.3	542164.640	7922138.128	BTC CURVE j5	543294.918	7921317.032
BCC CURVE c5	540746.812	7921459.090	ECC CURVE e5	541150.759	7922003.764	BTC CURVE g5	542234.528	7922055.405	BCC CURVE j5	543360.747	7921271.593
PI CURVE c5	540883.007	7921532.424	ES No.12 RH 13	541170.860	7922029.573	BCC CURVE g5	542287.304	7921995.298	PI CURVE j5	543618.101	7921084.745
ECC CURVE c5	540959.193	7921667.045	ETO No.12 RH 13	541169.335	7922030.456	PI CURVE g5	542350.347	7921918.316	ECC CURVE j5	543919.314	7921186.795
ETC CURVE c5	541000.584	7921735.491	PI No.12 RH 13	541181.469	7922047.892	ECC CURVE g5	542439.468	7921874.064	ETC CURVE j5	543995.663	7921210.649
BTC CURVE d5	540674.580	7921423.795	SRJ No.12 RH 13	541187.733	7922058.713	ETC CURVE g5	542509.846	7921836.051	BTC CURVE k5	544162.103	7921266.152
BCC CURVE d5	540743.883	7921463.736	BTC CURVE f5	541200.227	7922080.291	BTC CURVE h5	542651.381	7921763.053	BCC CURVE k5	544238.268	7921290.613
PI CURVE d5	540879.013	7921536.503	BCC No.12 RH 13	541241.969	7922148.515	BCC CURVE h5	542721.760	7921725.039	PI CURVE k5	544510.613	7921382.368
ECC CURVE d5	540954.433	7921669.801	PI No.12 RH 13	541612.276	7922791.935	PI CURVE h5	542732.766	7921721.077	ECC CURVE k5	544791.456	7921321.393
ETC CURVE d5	540995.986	7921738.526	ECC No.12 RH 13	542089.889	7922223.603	ECC CURVE h5	542741.295	7921713.070	ETC CURVE k5	544869.864	7921305.533
BCC CURVE e5	541137.378	7921982.723	ETC No.12 RH 13	542142.971	7922163.776	ETC CURVE h5	542807.124	7921667.632			

CURVE c5	CURVE d5	CURVE e5	CURVE f5	CURVE g5	CURVE h5	CURVE j5	CURVE k5
RAD. = 700.000m SPIRAL = 80m SHIFT = 0.381m D.A. = 9.6625° T.L. = 99.193m ARC. = 38.050+160m	RAD. = 694.5m SPIRAL = 80m SHIFT = 0.384m D.A. = 31.0640° T.L. = 233.126 m ARC. = 456.536 +160m	RAD. = 300.000m SPIRAL = 0m SHIFT = 0m D.A. = 4.7636° T.L. = 12.478m ARC. = 24.942m	RAD. = 550.000m SPIRAL = 80m SHIFT = 0.485m D.A. = 109.7362° T.L. = 217.194m ARC. = 822.327+160m	RAD. = 700.000m SPIRAL = 80m SHIFT = 0.381m D.A. = 22.5243° T.L. = 179.464m ARC. = 195.186+160m	RAD. = 700.000m SPIRAL = 80m SHIFT = 0.381m D.A. = 8.4234° T.L. = 91.572m ARC. = 22.912+160m	RAD. = 700.000m SPIRAL = 80m SHIFT = 0.381m D.A. = 54.1484° T.L. = 398.001m ARC. = 581.548+160m	RAD. = 1200.000m SPIRAL = 80m SHIFT = 0.222m D.A. = 30.5142° T.L. = 367.376m ARC. = 559.087+160m
Dc = 2.495" Ea = 1.500" Eu,f = 1.294" Vf = 40mph	Dc = 2.511" Ea = 1.500" Eu,f = 1.313" Vf = 40mph	Dc = 5.824" Ea = 0.000" Eu,f = 5.023" Vf = 40mph	Dc = 3.176" Ea = 2.000" Eu,f = 2.057" Vf = 40mph	Dc = 2.495" Ea = 1.500" Eu,f = 1.294" Vf = 40mph	Dc = 2.495" Ea = 1.500" Eu,f = 1.294" Vf = 40mph	Dc = 2.495" Ea = 1.500" Eu,f = 1.294" Vf = 40mph	Dc = 1.455" Ea = 1.000" Eu,f = 0.630" Vf = 40mph


TRUE NORTH
MILNE PORT
H353004-30000-224-271-0028-0001 PORT YARD LAYOUT
H353004-30000-224-271-0004-0001 CH. 0.000km TO 4.800km
H353004-30000-224-271-0005-0001 CH. 4.820km TO 9.440km
H353004-30000-224-271-0006-0001 CH. 9.460km TO 14.080km
H353004-30000-224-271-0007-0001 CH. 14.100km TO 18.720km
H353004-30000-224-271-0008-0001 CH. 18.740km TO 23.360km
H353004-30000-224-271-0009-0001 CH. 23.380km TO 28.000km
H353004-30000-224-271-0010-0001 CH. 28.020km TO 32.640km
H353004-30000-224-271-0011-0001 CH. 32.660km TO 37.280km
H353004-30000-224-271-0012-0001 CH. 37.300km TO 41.920km
H353004-30000-224-271-0013-0001 CH. 41.940km TO 46.560km
H353004-30000-224-271-0014-0001 CH. 46.580km TO 51.200km
H353004-30000-224-271-0015-0001 CH. 51.220km TO 55.840km
H353004-30000-224-271-0016-0001 CH. 55.860km TO 60.480km
H353004-30000-224-271-0017-0001 CH. 60.500km TO 65.120km
H353004-30000-224-271-0018-0001 CH. 65.140km TO 69.760km
H353004-30000-224-271-0019-0001 CH. 69.780km TO 74.400km
H353004-30000-224-271-0020-0001 CH. 74.420km TO 79.040km
H353004-30000-224-271-0021-0001 CH. 79.060km TO 83.680km
H353004-30000-224-271-0022-0001 CH. 83.700km TO 88.320km
THIS DRAWING
H353004-30000-224-271-0023-0001 CH. 88.340km TO 92.960km
H353004-30000-224-271-0024-0001 CH. 92.980km TO 97.600km
H353004-30000-224-271-0025-0001 CH. 97.620km TO 102.240km
H353004-30000-224-271-0026-0001 CH. 102.260km TO 106.880km
H353004-30000-224-271-0027-0001 CH. 106.900km TO 109.611km
PROJECT SPLIT BATTERY LIMIT
CC015
CC011
MINE SITE

KEY PLAN

NTS

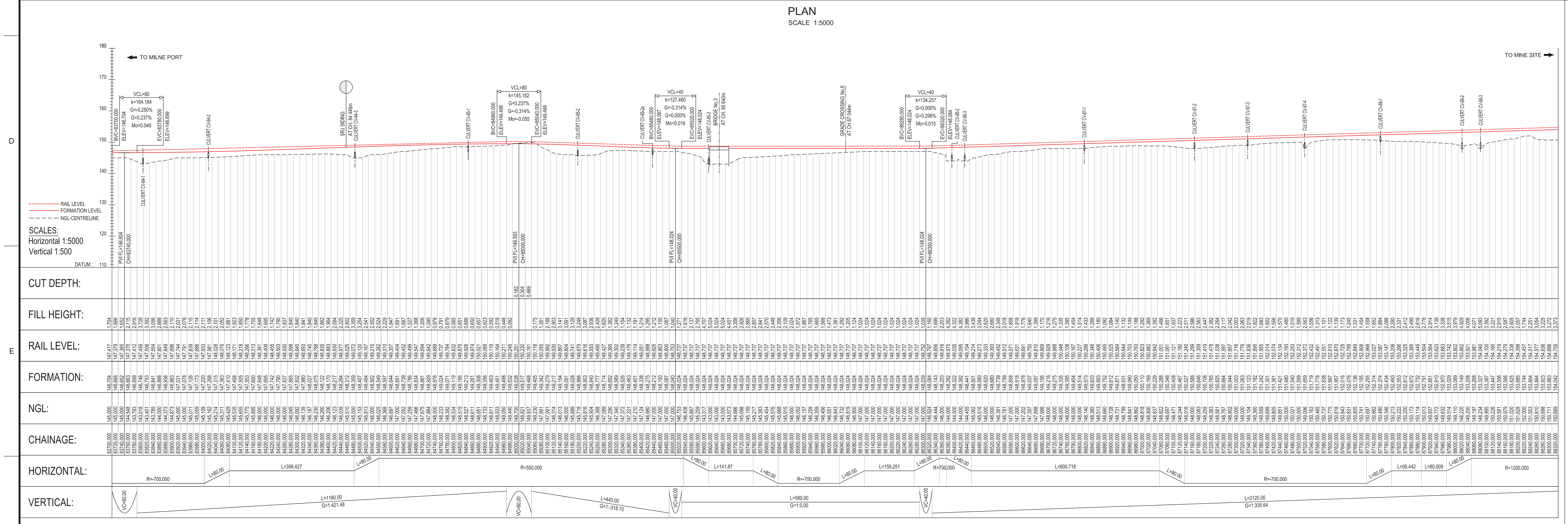
LEGEND :

▣ = APPROVED WATER SOURCES

▨ = MASSIVE ICE FORMATION

NOTE :

1. EARTHWORKS FOOTPRINT DOES NOT INDICATE EXTENT OF FORMATION WIDENING AROUND CURVES WHERE APPLICABLE (REFER TO TYPICAL DRAWINGS) .
2. START / END DEVIATION REFER TO RAIL ALIGNMENT EXTENDING BEYOND EXISTING PERMITTING AREA BOUNDARIES.
3. CO-ORDINATE SYSTEM: WGS 1984 UTM, ZONE 17 NORTH, METER
4. ALL DIMENSIONS SHOWN ARE IN METERS, UNLESS OTHERWISE SPECIFIED.
5. THIS DRAWING WAS PREVIOUSLY ISSUED AS: H353004-00000-224-272-0022 -0001
6. FORMATION = TOP OF SUBGRADE.
7. CURVE DATA BELOW THE LINE IS IN IMPERIAL UNITS (IU).


TO MILNE PORT
TO MINE SITE
RAIL LEVEL
FORMATION LEVEL
NGL-CENTRELINE
SCALES:
Horizontal 1:5000
Vertical 1:500
DATUM : 110
CUT DEPTH:
FILL HEIGHT:
RAIL LEVEL:
FORMATION:
NGL:
CHAINAGE:
HORIZONTAL:
VERTICAL:
SRJ SIDING AT CH. 84 448m
BRIDGE No.3 AT CH. 85 640m
GRADE CROSSING No.6 AT CH. 87 044m
R=-700.000
L=398.427
R=550.000
L=141.87
L=159.251
L=600.718
L=95.442
L=80.009
R=1200.000
L=1180.00 G=1:421.48
L=440.00 G=1:-318.70
L=580.00 G=1:0.00
L=2120.00 G=1:335.64
VC=40.00
VC=80.00

LONGITUDINAL SECTION

DRAWING No.	DRAWING TITLE
H353004-30000-224-271-0023-0001	LINE PLAN AND LONGITUDINAL SECTION CH. 88+340 TO CH. 92+960
H353004-30000-224-271-0021-0001	LINE PLAN AND LONGITUDINAL SECTION CH. 79+060 TO CH. 83+680

REFERENCE DRAWINGS

REG. PROFESSIONAL

NOT FOR CONSTRUCTION

THIS DRAWING WAS PREPARED BY HATCH LTD. ("HATCH") FOR THE EXCLUSIVE USE OF BAFFINLAND IRON MINES LP ("CLIENT") AND ITS USE IS SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT BETWEEN HATCH AND THE THE CLIENT, INCLUDING ANY LIMITATIONS ON LIABILITY CONTAINED THEREIN. THIS DRAWING AND ITS CONTENTS REMAIN THE INTELLECTUAL PROPERTY OF HATCH SUBJECT TO CLIENT'S ROYALTY-FREE, IRREVOCABLE, PERPETUAL AND NON-EXCLUSIVE LICENSE TO USE AND REPRODUCE THE DRAWING FOR PURPOSES CONNECTED WITH THE PROJECT, INCLUDING THE CONSTRUCTION, COMPLETION, MAINTENANCE, EXTENSION, REINSTATEMENT AND REPAIR OF THE PROJECT. THIS DRAWING, AND THE INFORMATION CONTAINED HEREIN, SHALL BE TREATED AS CONFIDENTIAL FOR ALL OTHER PURPOSES AND SHALL NOT BE MODIFIED WITHOUT THE WRITTEN CONSENT OF HATCH.

No.	DESCRIPTION	BY	CHK'D	DATE
A	INTERNAL / CLIENT REVIEW.	AJVN		2019/01/10

REVISIONS

HATCH

ROLE	NAME	SIGNATURE	DATE
DRAFTSPERSON	A VAN NIEKERK	NR	2017/01/24
DESIGNER	A VAN NIEKERK	NR	2017/01/07
CHECKER	G JOHNSTONE	Digitally signed by Glen johnstone Date: 2019.01.25 14:35:29 -05'00'	
DESIGN COORD.	G JOHNSTONE	Digitally signed by Glen johnstone Date: 2019.01.25 14:35:58 -05'00'	
RESP. ENG.	R HALIM		
LEAD DISC. ENG.	F VAN BILJON	van Biljon, Fanus	
AREA LEAD	F VAN BILJON	van Biljon, Fanus	
ENG. MANAGER	D STANGER		
AREA MANAGER	F PITTMAN		

DRAWING APPROVAL STATUS: Internal / Client Review

PERMIT TO PRACTICE
HATCH LTD.
Signature ______
Date ______
PERMIT NUMBER: P 512
The Association of Professional Engineers, Geologists and Geophysicists of NWT/NU

Baffinland

BAFFINLAND IRON MINES LP
MARY RIVER PROJECT

RAIL SITE
PLAN AND LONGITUDINAL SECTION
CH. 83+700 TO CH. 88+320

SCALE 1:5,000 OR AS NOTED

DWG. No. H353004-30000-224-271-0022-0001

REV A

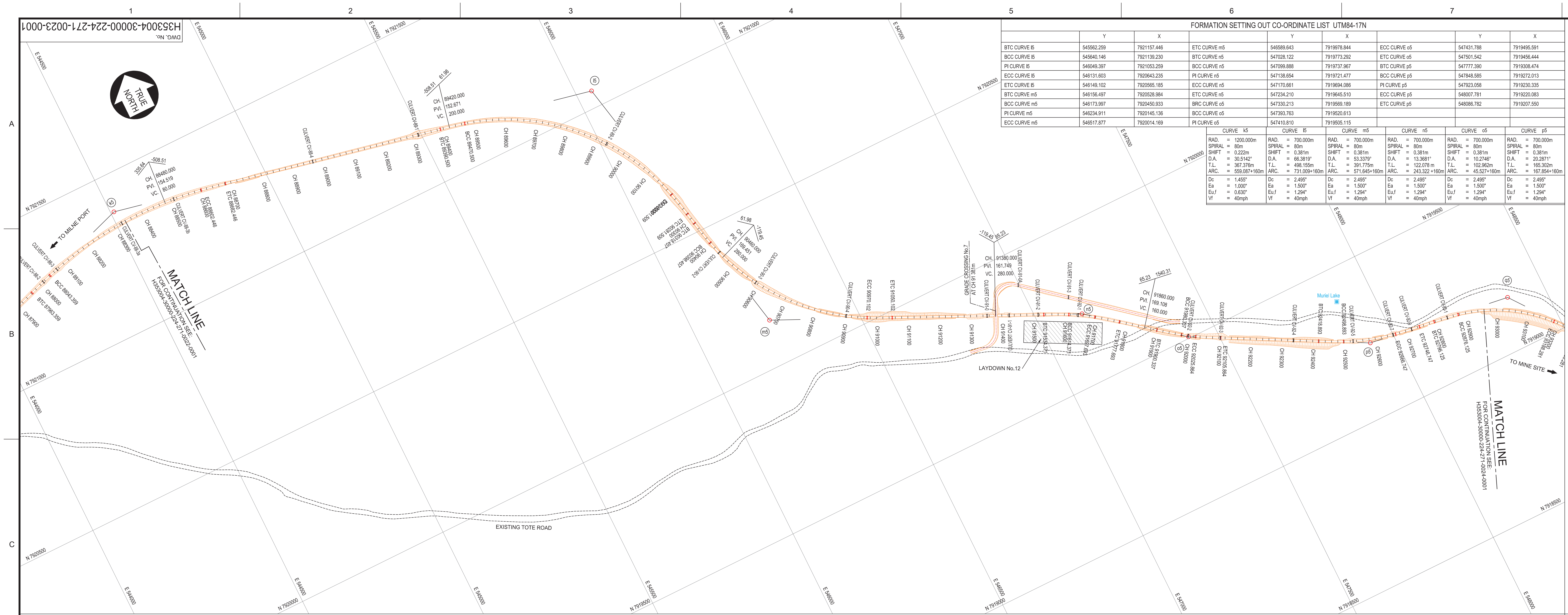
SHEET SIZE: A0

$USERNAME$ $DATE$ $FILE$ $TIME$

DWG. No. H353004-30000-224-271-0023-0001

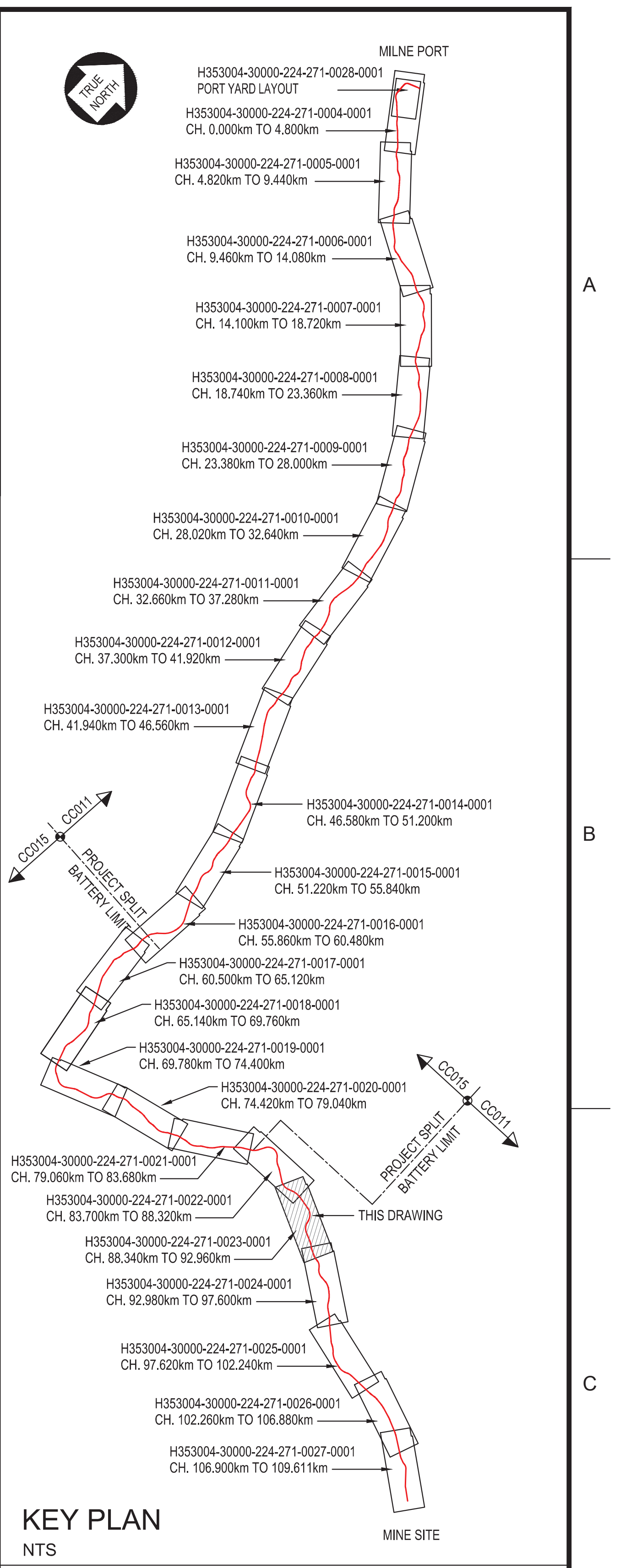
FORMATION SETTING OUT CO-ORDINATE LIST UTM84-17N	Y	X		Y	X		Y	X
BTC CURVE l5	545562.259	7921157.446	ETC CURVE m5	546589.643	7919978.844	ECC CURVE o5	547431.788	7919495.591
BCC CURVE l5	545640.146	7921139.230	BTC CURVE n5	547028.122	7919773.292	ETC CURVE o5	547501.542	7919456.444
PI CURVE l5	546049.397	7921053.259	BCC CURVE n5	547099.888	7919737.967	BTC CURVE p5	547777.390	7919308.474
ECC CURVE l5	546131.603	7920643.235	PI CURVE n5	547138.654	7919721.477	BCC CURVE p5	547848.585	7919272.013
ETC CURVE l5	546149.102	7920565.185	ECC CURVE n5	547170.661	7919694.086	PI CURVE p5	547923.058	7919230.335
BTC CURVE m5	546156.497	7920528.984	ETC CURVE n5	547234.210	7919645.510	ECC CURVE p5	548007.781	7919220.083
BCC CURVE m5	546173.997	7920450.933	BRC CURVE o5	547330.213	7919569.189	ETC CURVE p5	548086.782	7919207.550
PI CURVE m5	546234.911	7920145.136	BCC CURVE o5	547393.763	7919520.613			
ECC CURVE m5	546517.877	7920014.169	PI CURVE o5	547410.810	7919505.115			

CURVE k5	CURVE l5	CURVE m5	CURVE n5	CURVE o5	CURVE p5
RAD. = 1200.000m SPIRAL = 80m SHIFT = 0.222m D.A. = 30.5142° T.L. = 367.376m ARC. = 559.087+160m	RAD. = 700.000m SPIRAL = 80m SHIFT = 0.381m D.A. = 66.3819° T.L. = 498.155m ARC. = 731.009+160m	RAD. = 700.000m SPIRAL = 80m SHIFT = 0.381m D.A. = 53.3379° T.L. = 391.775m ARC. = 571.645+160m	RAD. = 700.000m SPIRAL = 80m SHIFT = 0.381m D.A. = 13.3681° T.L. = 122.078 m ARC. = 243.322 +160m	RAD. = 700.000m SPIRAL = 80m SHIFT = 0.381m D.A. = 10.2746° T.L. = 102.962m ARC. = 45.527+160m	RAD. = 700.000m SPIRAL = 80m SHIFT = 0.381m D.A. = 20.2871° T.L. = 165.302m ARC. = 167.854+160m
Dc = 1.455" Ea = 1.000" Eu,f = 0.630" Vf = 40mph	Dc = 2.495" Ea = 1.500" Eu,f = 1.294" Vf = 40mph	Dc = 2.495" Ea = 1.500" Eu,f = 1.294" Vf = 40mph	Dc = 2.495" Ea = 1.500" Eu,f = 1.294" Vf = 40mph	Dc = 2.495" Ea = 1.500" Eu,f = 1.294" Vf = 40mph	Dc = 2.495" Ea = 1.500" Eu,f = 1.294" Vf = 40mph


TRUE NORTH
TO MILNE PORT
MATCH LINE
FOR CONTINUATION SEE H353004-30000-224-271-0022-0001
LAYDOWN No.12
GRADE CROSSING No.7 AT CH 91,381m
Muriel Lake
EXISTING TOTE ROAD
TO MINE SITE
MATCH LINE
FOR CONTINUATION SEE H353004-30000-224-271-0024-0001

PLAN

SCALE 1:5000


MILNE PORT
H353004-30000-224-271-0028-0001
PORT YARD LAYOUT
H353004-30000-224-271-0004-0001
CH. 0.000km TO 4.800km
H353004-30000-224-271-0005-0001
CH. 4.820km TO 9.440km
H353004-30000-224-271-0006-0001
CH. 9.460km TO 14.080km
H353004-30000-224-271-0007-0001
CH. 14.100km TO 18.720km
H353004-30000-224-271-0008-0001
CH. 18.740km TO 23.360km
H353004-30000-224-271-0009-0001
CH. 23.380km TO 28.000km
H353004-30000-224-271-0010-0001
CH. 28.020km TO 32.640km
H353004-30000-224-271-0011-0001
CH. 32.660km TO 37.280km
H353004-30000-224-271-0012-0001
CH. 37.300km TO 41.920km
H353004-30000-224-271-0013-0001
CH. 41.940km TO 46.560km
H353004-30000-224-271-0014-0001
CH. 46.580km TO 51.200km
H353004-30000-224-271-0015-0001
CH. 51.220km TO 55.840km
H353004-30000-224-271-0016-0001
CH. 55.860km TO 60.480km
H353004-30000-224-271-0017-0001
CH. 60.500km TO 65.120km
H353004-30000-224-271-0018-0001
CH. 65.140km TO 69.760km
H353004-30000-224-271-0019-0001
CH. 69.780km TO 74.400km
H353004-30000-224-271-0020-0001
CH. 74.420km TO 79.040km
H353004-30000-224-271-0021-0001
CH. 79.060km TO 83.680km
H353004-30000-224-271-0022-0001
CH. 83.700km TO 88.320km
H353004-30000-224-271-0023-0001
CH. 88.340km TO 92.960km
H353004-30000-224-271-0024-0001
CH. 92.980km TO 97.600km
H353004-30000-224-271-0025-0001
CH. 97.620km TO 102.240km
H353004-30000-224-271-0026-0001
CH. 102.260km TO 106.880km
H353004-30000-224-271-0027-0001
CH. 106.900km TO 109.611km
CC015
CC011
PROJECT SPLIT BATTERY LIMIT
THIS DRAWING
MINE SITE

KEY PLAN

NTS

LEGEND :

▣ = APPROVED WATER SOURCES

▨ = MASSIVE ICE FORMATION

NOTE :

1. EARTHWORKS FOOTPRINT DOES NOT INDICATE EXTENT OF FORMATION WIDENING AROUND CURVES WHERE APPLICABLE (REFER TO TYPICAL DRAWINGS) .
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3. CO-ORDINATE SYSTEM: WGS 1984 UTM, ZONE 17 NORTH, METER
4. ALL DIMENSIONS SHOWN ARE IN METERS, UNLESS OTHERWISE SPECIFIED.
5. THIS DRAWING WAS PREVIOUSLY ISSUED AS:
   H353004-00000-224-272-0023 -0001
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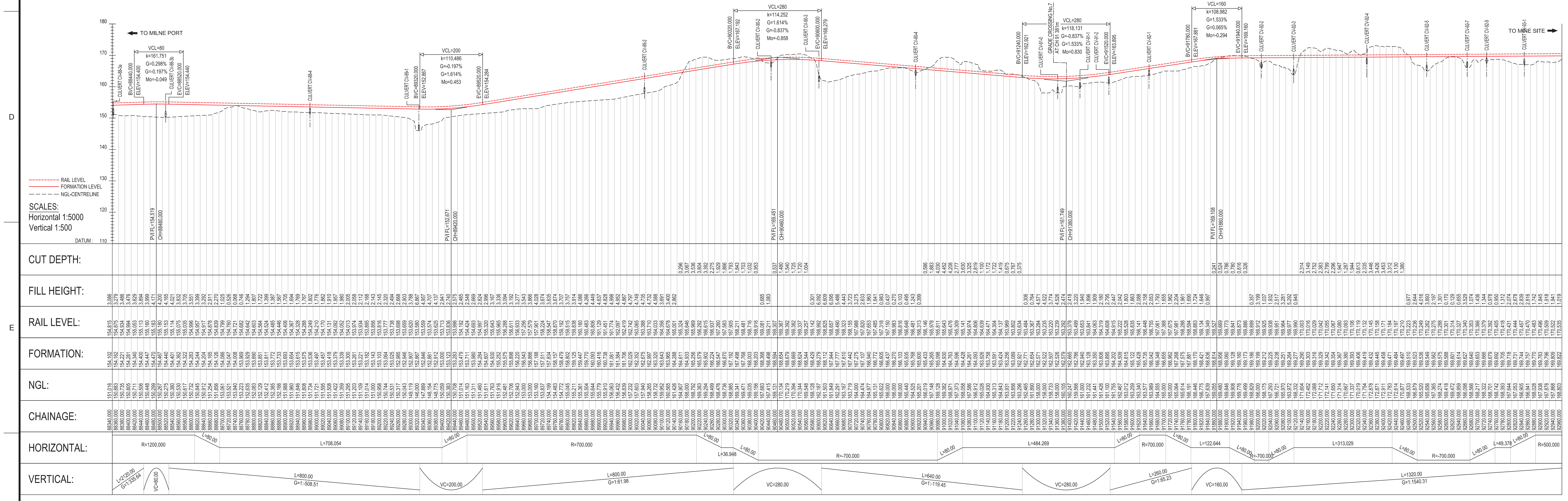
TO MILNE PORT
TO MINE SITE
RAIL LEVEL
FORMATION LEVEL
NGL-CENTRELINE
SCALES:
Horizontal 1:5000
Vertical 1:500
DATUM : 110
CUT DEPTH:
FILL HEIGHT:
RAIL LEVEL:
FORMATION:
NGL:
CHAINAGE:
HORIZONTAL:
VERTICAL:
R=1200.000
L=708.054
R=700.000
R=-700.000
L=484.269
L=122.644
L=313.029
R=500.000
L=2120.00 G=1:335.64
VC=80.00
L=800.00 G=1:-508.51
VC=200.00
L=800.00 G=1:61.98
VC=280.00
L=640.00 G=1:-119.45
L=260.00 G=1:65.23
VC=160.00
L=1320.00 G=1:1540.31

LONGITUDINAL SECTION

DRAWING No.	DRAWING TITLE
H353004-30000-224-271-00240001	LINE PLAN AND LONGITUDINAL SECTION CH. 88+340 TO CH. 92+960
H353004-30000-224-271-0022-0001	LINE PLAN AND LONGITUDINAL SECTION CH. 79+060 TO CH. 83+680

REFERENCE DRAWINGS

REG. PROFESSIONAL

NOT FOR CONSTRUCTION

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No.	DESCRIPTION	BY	CHK'D	DATE
A	INTERNAL / CLIENT REVIEW.	AJVN		2019/01/10

REVISIONS

HATCH

ROLE	NAME	SIGNATURE	DATE
DRAFTSPERSON	A VAN NIEKERK	NR	2017/01/24
DESIGNER	A VAN NIEKERK	NR	2017/01/07
CHECKER	G JOHNSTONE		Digitally signed by Glen johnstone Date: 2019.01.25 14:36:47 -05'00'
DESIGN COORD.	G JOHNSTONE		Digitally signed by Glen johnstone Date: 2019.01.25 14:37:15 -05'00'
RESP. ENG.	R HALIM		
LEAD DISC. ENG.	F VAN BILJON	van Biljon, Fanus	
AREA LEAD	F VAN BILJON	van Biljon, Fanus	
ENG. MANAGER	D STANGER		
AREA MANAGER	F PITTMAN		

DRAWING APPROVAL STATUS: Internal / Client Review

PERMIT TO PRACTICE
HATCH LTD.
Signature ____________
Date ____________
PERMIT NUMBER: P 512
The Association of Professional Engineers, Geologists and Geophysicists of NWT/NU

Baffinland

BAFFINLAND IRON MINES LP
MARY RIVER PROJECT

RAIL SITE
PLAN AND LONGITUDINAL SECTION
CH. 88+340 TO CH. 92+960

SCALE 1:5,000 OR AS NOTED

DWG. No. H353004-30000-224-271-0023-0001

REV A

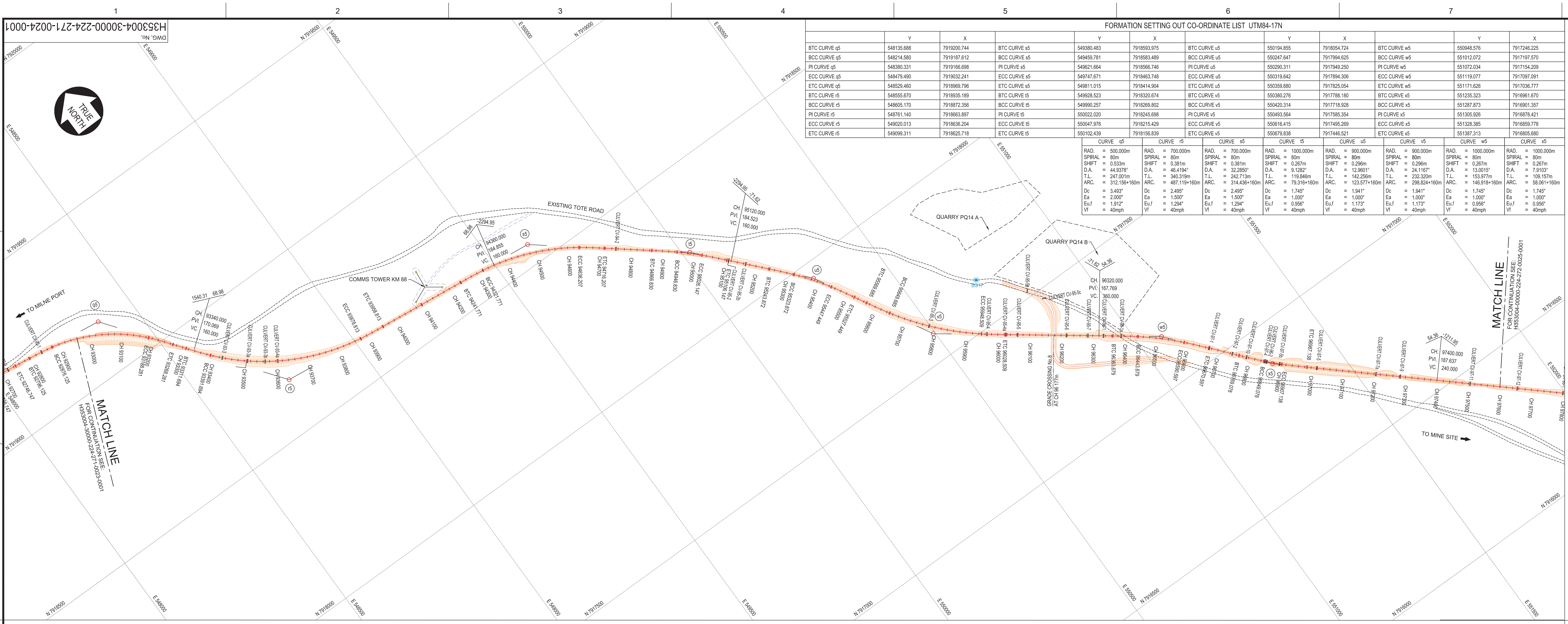
SHEET SIZE: A0

$USERNAME$ $DATE$ $FILE$ $TIME$

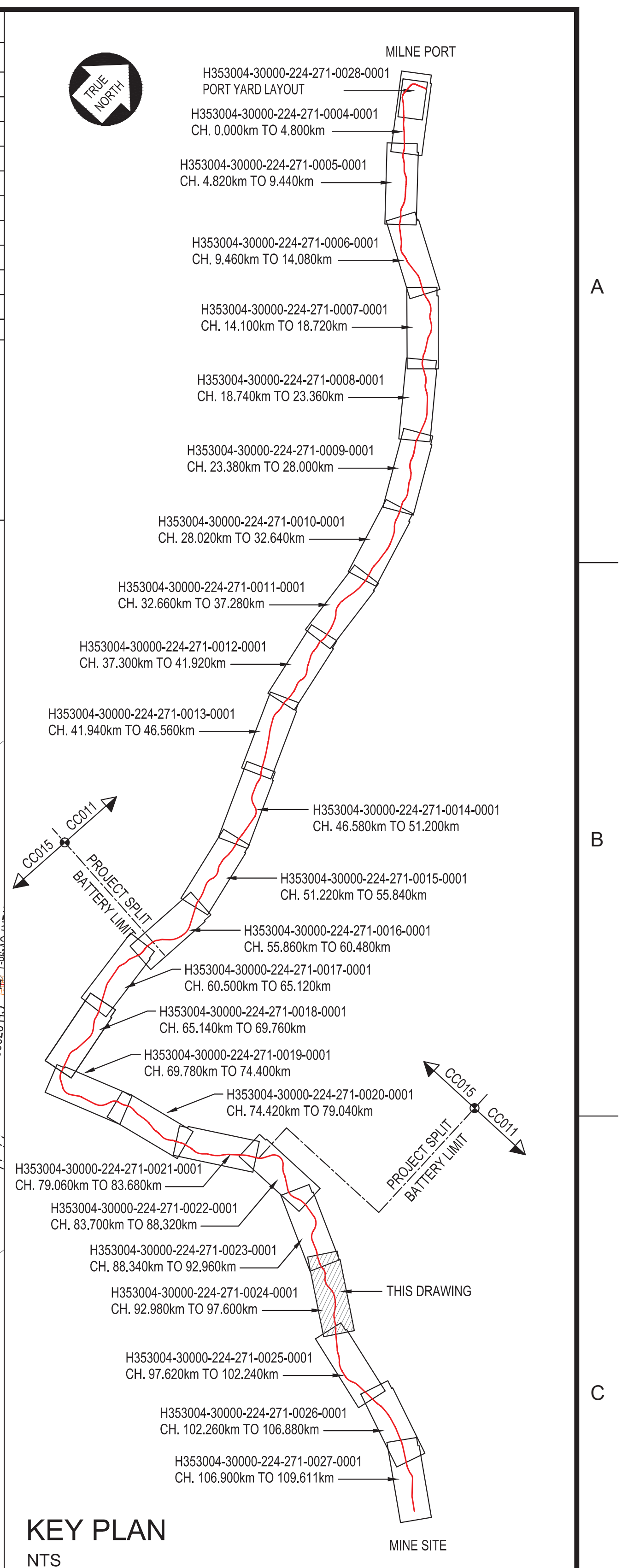
FORMATION SETTING OUT CO-ORDINATE LIST UTM84-17N

	Y	X		Y	X		Y	X		Y	X
BTC CURVE q5	548135.688	7919200.744	BTC CURVE s5	549380.483	7918593.975	BTC CURVE u5	550194.855	7918054.724	BTC CURVE w5	550948.576	7917246.225
BCC CURVE q5	548214.580	7919187.612	BCC CURVE s5	549459.781	7918583.489	BCC CURVE u5	550247.647	7917994.625	BCC CURVE w5	551012.072	7917197.570
PI CURVE q5	548380.331	7919166.698	PI CURVE s5	549621.664	7918566.746	PI CURVE u5	550290.311	7917949.250	PI CURVE w5	551072.034	7917154.209
ECC CURVE q5	548479.490	7919032.241	ECC CURVE s5	549747.671	7918463.748	ECC CURVE u5	550319.642	7917894.306	ECC CURVE w5	551119.077	7917097.091
ETC CURVE q5	548529.460	7918969.796	ETC CURVE s5	549811.015	7918414.904	ETC CURVE u5	550359.680	7917825.054	ETC CURVE w5	551171.626	7917036.777
BTC CURVE r5	548555.670	7918935.189	BTC CURVE t5	549928.523	7918320.674	BTC CURVE v5	550380.276	7917788.180	BTC CURVE x5	551235.323	7916961.670
BCC CURVE r5	548605.170	7918872.356	BCC CURVE t5	549990.257	7918269.802	BCC CURVE v5	550420.314	7917718.928	BCC CURVE x5	551287.873	7916901.357
PI CURVE r5	548761.140	7918663.897	PI CURVE t5	550022.020	7918245.698	PI CURVE v5	550493.564	7917585.354	PI CURVE x5	551305.926	7916878.421
ECC CURVE r5	549020.013	7918636.204	ECC CURVE t5	550047.976	7918215.429	ECC CURVE v5	550616.415	7917495.269	ECC CURVE x5	551328.385	7916859.778
ETC CURVE r5	549099.311	7918625.718	ETC CURVE t5	550102.439	7918156.839	ETC CURVE v5	550679.838	7917446.521	ETC CURVE x5	551387.313	7916805.680

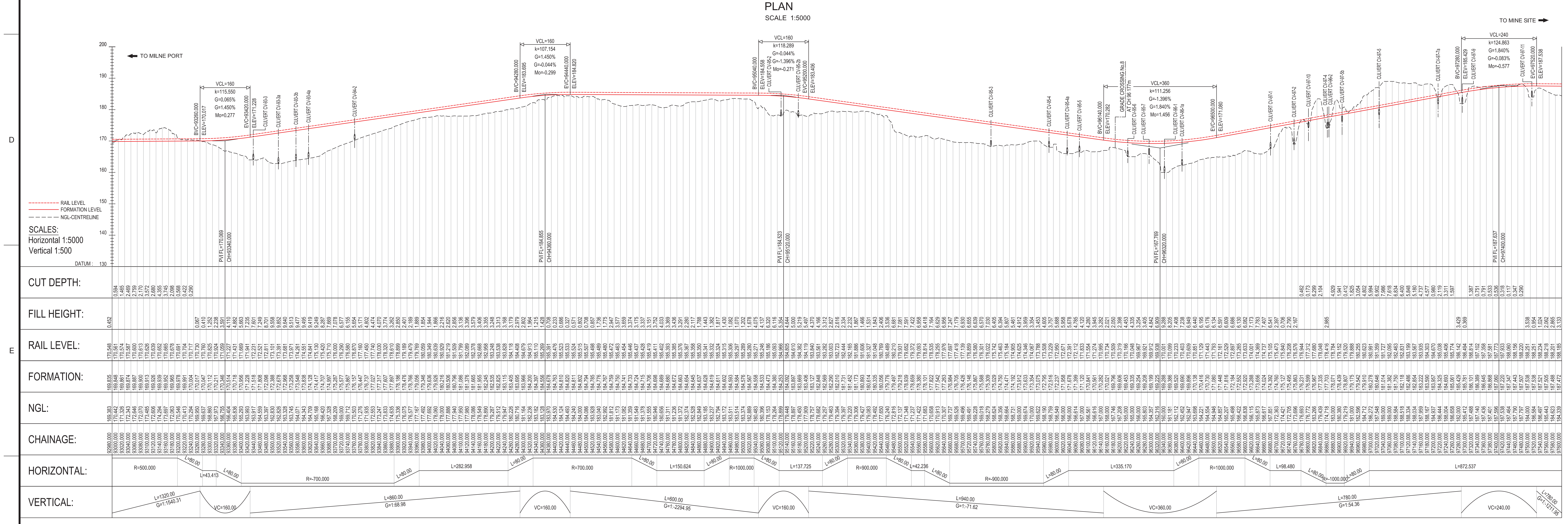
CURVE q5	CURVE r5	CURVE s5	CURVE t5	CURVE u5	CURVE v5	CURVE w5	CURVE x5
RAD. = 500.000m	RAD. = 700.000m	RAD. = 700.000m	RAD. = 1000.000m	RAD. = 900.000m	RAD. = 900.000m	RAD. = 1000.000m	RAD. = 1000.000m
SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m	SPIRAL = 80m
SHIFT = 0.533m	SHIFT = 0.381m	SHIFT = 0.381m	SHIFT = 0.267m	SHIFT = 0.296m	SHIFT = 0.296m	SHIFT = 0.267m	SHIFT = 0.267m
D.A. = 44.9378°	D.A. = 46.4194°	D.A. = 32.2850°	D.A. = 9.1282°	D.A. = 12.9601°	D.A. = 24.1167°	D.A. = 13.0015°	D.A. = 7.9103°
T.L. = 247.001m	T.L. = 340.319m	T.L. = 242.713m	T.L. = 119.846m	T.L. = 142.256m	T.L. = 232.320m	T.L. = 153.977m	T.L. = 109.157m
ARC. = 312.156+160m	ARC. = 487.119+160m	ARC. = 314.436+160m	ARC. = 79.316+160m	ARC. = 123.577+160m	ARC. = 298.824+160m	ARC. = 146.918+160m	ARC. = 58.061+160m
Dc = 3.493"	Dc = 2.495"	Dc = 2.495"	Dc = 1.745"	Dc = 1.941"	Dc = 1.941"	Dc = 1.745"	Dc = 1.745"
Ea = 2.000"	Ea = 1.500"	Ea = 1.500"	Ea = 1.000"	Ea = 1.000"	Ea = 1.000"	Ea = 1.000"	Ea = 1.000"
Eu,f = 1.912"	Eu,f = 1.294"	Eu,f = 1.294"	Eu,f = 0.956"	Eu,f = 1.173"	Eu,f = 1.173"	Eu,f = 0.956"	Eu,f = 0.956"
Vf = 40mph	Vf = 40mph	Vf = 40mph	Vf = 40mph	Vf = 40mph	Vf = 40mph	Vf = 40mph	Vf = 40mph


TRUE NORTH
TO MILNE PORT
EXISTING TOTE ROAD
COMMS TOWER KM 88
QUARRY PQ14 A
QUARRY PQ14 B
GRADE CROSSING No.8 AT CH 96.177m
MATCH LINE FOR CONTINUATION SEE: H353004-30000-224-271-0023-0001
MATCH LINE FOR CONTINUATION SEE: H353004-00000-224-272-0025-0001
TO MINE SITE
CH. 95120.000 PVI. 184.523 VC. 160.000
CH. 96320.000 PVI. 167.769 VC. 360.000
CH. 97400.000 PVI. 187.637 VC. 240.000
CH. 93340.000 PVI. 170.069 VC. 160.000
CH. 94360.000 PVI. 184.855 VC. 160.000

PLAN
SCALE 1:5000


MILNE PORT
H353004-30000-224-271-0028-0001 PORT YARD LAYOUT
H353004-30000-224-271-0004-0001 CH. 0.000km TO 4.800km
H353004-30000-224-271-0005-0001 CH. 4.820km TO 9.440km
H353004-30000-224-271-0006-0001 CH. 9.460km TO 14.080km
H353004-30000-224-271-0007-0001 CH. 14.100km TO 18.720km
H353004-30000-224-271-0008-0001 CH. 18.740km TO 23.360km
H353004-30000-224-271-0009-0001 CH. 23.380km TO 28.000km
H353004-30000-224-271-0010-0001 CH. 28.020km TO 32.640km
H353004-30000-224-271-0011-0001 CH. 32.660km TO 37.280km
H353004-30000-224-271-0012-0001 CH. 37.300km TO 41.920km
H353004-30000-224-271-0013-0001 CH. 41.940km TO 46.560km
H353004-30000-224-271-0014-0001 CH. 46.580km TO 51.200km
H353004-30000-224-271-0015-0001 CH. 51.220km TO 55.840km
H353004-30000-224-271-0016-0001 CH. 55.860km TO 60.480km
H353004-30000-224-271-0017-0001 CH. 60.500km TO 65.120km
H353004-30000-224-271-0018-0001 CH. 65.140km TO 69.760km
H353004-30000-224-271-0019-0001 CH. 69.780km TO 74.400km
H353004-30000-224-271-0020-0001 CH. 74.420km TO 79.040km
H353004-30000-224-271-0021-0001 CH. 79.060km TO 83.680km
H353004-30000-224-271-0022-0001 CH. 83.700km TO 88.320km
H353004-30000-224-271-0023-0001 CH. 88.340km TO 92.960km
H353004-30000-224-271-0024-0001 CH. 92.980km TO 97.600km
THIS DRAWING
H353004-30000-224-271-0025-0001 CH. 97.620km TO 102.240km
H353004-30000-224-271-0026-0001 CH. 102.260km TO 106.880km
H353004-30000-224-271-0027-0001 CH. 106.900km TO 109.611km
PROJECT SPLIT BATTERY LIMIT
MINE SITE

KEY PLAN
NTS


TO MILNE PORT
TO MINE SITE
RAIL LEVEL
FORMATION LEVEL
NGL-CENTRELINE
SCALES:
Horizontal 1:5000
Vertical 1:500
DATUM
CUT DEPTH:
FILL HEIGHT:
RAIL LEVEL:
FORMATION:
NGL:
CHAINAGE:
HORIZONTAL:
VERTICAL:
L=1320.00 G=1:1540.31
VC=160.00
L=860.00 G=1:68.98
L=600.00 G=1:-2294.95
L=940.00 G=1:-71.62
VC=360.00
L=780.00 G=1:54.36
VC=240.00
L=780.00 G=1:-1211.95
R=500.000
R=-700.000
R=700.000
R=1000.000
R=900.000
R=-900.000
R=-1000.000

LONGITUDINAL SECTION

LEGEND :

▣ = APPROVED WATER SOURCES

▨ = MASSIVE ICE FORMATION

NOTE :

1. EARTHWORKS FOOTPRINT DOES NOT INDICATE EXTENT OF FORMATION WIDENING AROUND CURVES WHERE APPLICABLE (REFER TO TYPICAL DRAWINGS) .
2. START / END DEVIATION REFER TO RAIL ALIGNMENT EXTENDING BEYOND EXISTING PERMITTING AREA BOUNDARIES.
3. CO-ORDINATE SYSTEM: WGS 1984 UTM, ZONE 17 NORTH, METER
4. ALL DIMENSIONS SHOWN ARE IN METERS, UNLESS OTHERWISE SPECIFIED.
5. THIS DRAWING WAS PREVIOUSLY ISSUED AS: H353004-00000-224-272-0023 -0001
6. FORMATION = TOP OF SUBGRADE.
7. CURVE DATA BELOW THE LINE IS IN IMPERIAL UNITS (IU).

PERMIT TO PRACTICE
HATCH LTD.
Signature
Date
PERMIT NUMBER: P 512
The Association of Professional Engineers, Geologists and Geophysicists of NWT/NU

DRAWING No.	DRAWING TITLE
H353004-30000-224-271-0025-0001	LINE PLAN AND LONGITUDINAL SECTION CH. 97+620 TO CH. 102+240
H353004-30000-224-271-0023-0001	LINE PLAN AND LONGITUDINAL SECTION CH. 88+340 TO CH. 92+960

REFERENCE DRAWINGS

REG. PROFESSIONAL

NOT FOR CONSTRUCTION

THIS DRAWING WAS PREPARED BY HATCH LTD. ("HATCH") FOR THE EXCLUSIVE USE OF BAFFINLAND IRON MINES LP ("CLIENT") AND ITS USE IS SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT BETWEEN HATCH AND THE THE CLIENT, INCLUDING ANY LIMITATIONS ON LIABILITY CONTAINED THEREIN. THIS DRAWING AND ITS CONTENTS REMAIN THE INTELLECTUAL PROPERTY OF HATCH SUBJECT TO CLIENT'S ROYALTY-FREE, IRREVOCABLE, PERPETUAL AND NON-EXCLUSIVE LICENSE TO USE AND REPRODUCE THE DRAWING FOR PURPOSES CONNECTED WITH THE PROJECT, INCLUDING THE CONSTRUCTION, COMPLETION, MAINTENANCE, EXTENSION, REINSTATEMENT AND REPAIR OF THE PROJECT. THIS DRAWING, AND THE INFORMATION CONTAINED HEREIN, SHALL BE TREATED AS CONFIDENTIAL FOR ALL OTHER PURPOSES AND SHALL NOT BE MODIFIED WITHOUT THE WRITTEN CONSENT OF HATCH.

No.	DESCRIPTION	BY	CHK'D	DATE
A	INTERNAL / CLIENT REVIEW.	AJVN		2019/01/10

REVISIONS

HATCH

ROLE	NAME	SIGNATURE	DATE
DRAFTSPERSON	A VAN NIEKERK	NR	2017/01/25
DESIGNER	A VAN NIEKERK	NR	2017/01/07
CHECKER	G JOHNSTONE		Digitally signed by Glen johnstone Date: 2019.01.25 14:38:11 -05'00'
DESIGN COORD.	G JOHNSTONE		Digitally signed by Glen johnstone Date: 2019.01.25 14:38:36 -05'00'
RESP. ENG.	R HALIM		
LEAD DISC. ENG.	F VAN BILJON	van Biljon, Fanus	Digitally signed by van Biljon, Fanus DN: dc=com, dc=hatchglobal, dc=corp, ou=JHB, ou=Users, cn=van Biljon, Fanus, email=fanus.vanbiljon@hatch.com Date: 2019.01.25 16:09:35 -05'00'
AREA LEAD	F VAN BILJON	van Biljon, Fanus	Digitally signed by van Biljon, Fanus DN: dc=com, dc=hatchglobal, dc=corp, ou=JHB, ou=Users, cn=van Biljon, Fanus, email=fanus.vanbiljon@hatch.com Date: 2019.01.25 16:11:22 -05'00'
ENG. MANAGER	D STANGER		
AREA MANAGER	F PITTMAN		

DRAWING APPROVAL STATUS: Client Review

Baffinland

BAFFINLAND IRON MINES LP
MARY RIVER PROJECT

RAIL SITE
PLAN LONGITUDINAL SECTION
CH. 92+980 TO CH. 97+600

SCALE 1:5,000 OR AS NOTED

DWG. No. H353004-30000-224-271-0024-0001

REV A

SHEET SIZE: A0

$USERNAME$ $DATE$ $FILE$ $TIME$